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THE JOURNAL

Arkansas Medical Society

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VOLUME VIII
No. 1

LITTLE ROCK, JUNE, 1911

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CONTENTS.

Annual Address—Delivered by President R. C. Dorr at the Thirty-fifth Annual Session of the Arkansas Medical Society.....	1	Proceedings of the Thirty-fifth Annual Session of the Arkansas Medical Society.....	9
The Family Physician, Then and Now—T. F. Kittrell, M. D., Texarkana.....	3	Tuberculosis Movement Increased 700 Per Cent—New Directory Shows 1,500 Agencies Engaged in Consumption Fight.....	26
Progress in Dermatology and Syphilology—S. E. Steer, M. D., Hot Springs.....	4	Pain in Duodenal Ulcer.....	26
Chairman's Address to the Section of Obstetrics and Gynecology—L. J. Hesterly, M. D., Prescott, Ark.	5	Verdict of Jury in Decker Case.....	27
Editorial	7	The Diagnostic Importance of the Skin Lesions in Pellagra.....	27
Our President.....	7	County Societies	28
Public Health Bill.....	7	Personals	29
City Hospital for Hot Springs.....	8	Births	29
		Deaths	29
		Book Reviews	29

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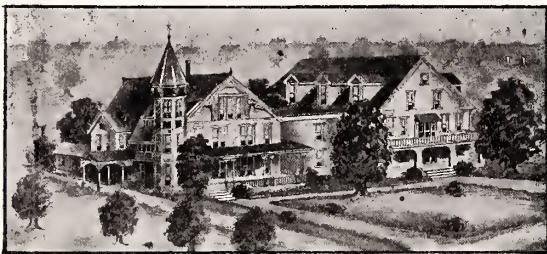
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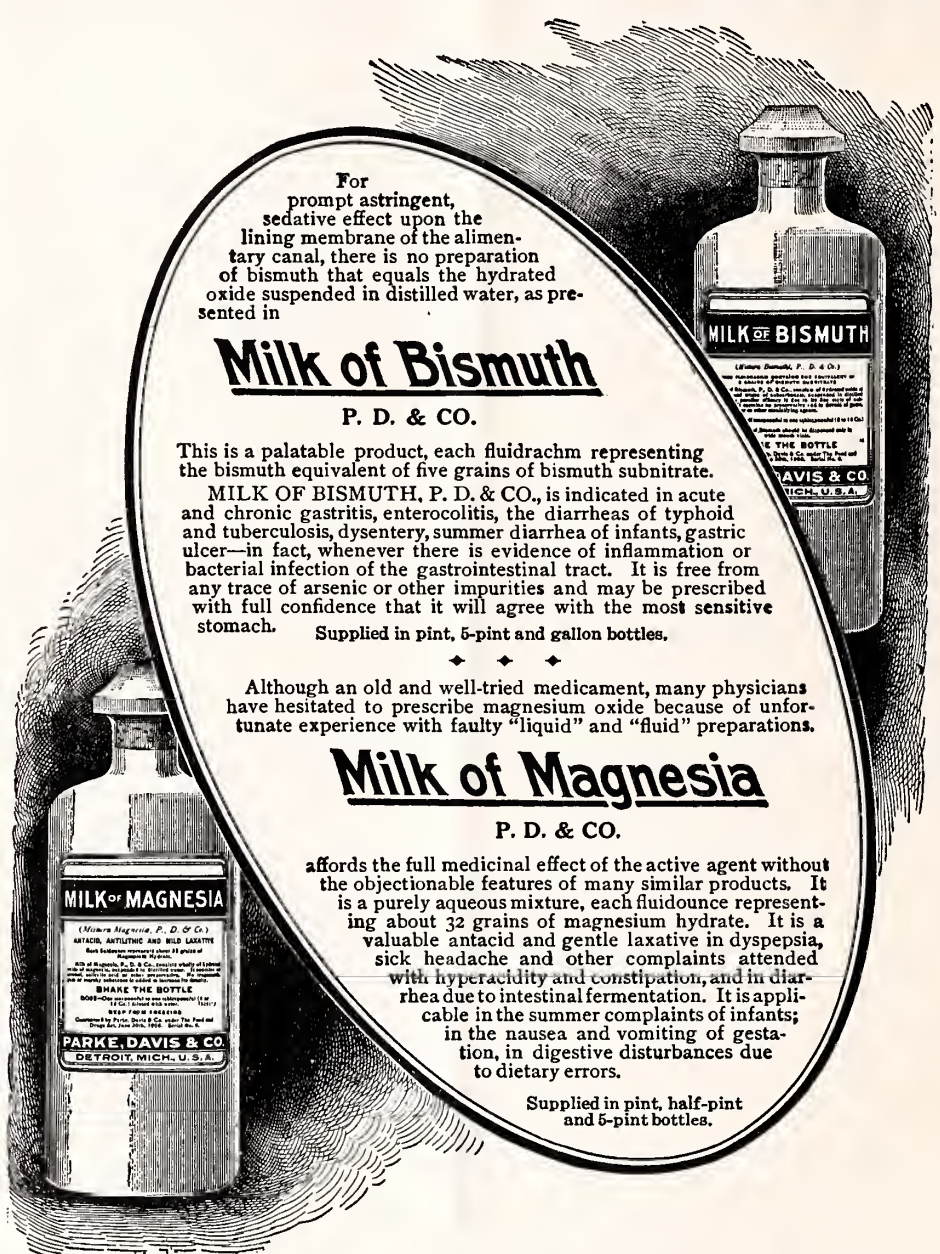
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H. H. NIEHUSS, M. D., *Editor*

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ANNUAL ADDRESS DELIVERED BY PRESIDENT R. C. DORR AT THE THIRTY-FIFTH ANNUAL SESSION OF THE ARKANSAS MEDICAL SOCIETY, HELD AT FORT SMITH, MAY 3-5, 1911.

In the exercise of brief authority conferred on me, perhaps by undue partiality one year ago; I have the honor to speak on this occasion for the medical men of Arkansas. And, complimentary as was your courtesy, important as the opportunity, and appreciated as must be the distinction, I promise that in what I may say, as your retiring president, I will endeavor to speak briefly and to the point. And while I shall handle some questions without gloves, and though you may differ with me, I hope you will at least accord me sincerity and honesty of purpose.

THE TURNER LAW.

I want to congratulate the society on the Supreme Court decision sustaining the Medical Practice Law, enacted in 1903, as amended in 1909, now known as the Turner Law, giving the State Board the right to revoke license for illegitimate practice.

MEDICAL COLLEGES DISORGANIZERS.

I would recommend, for the benefit of organized medicine, that this society, as a body,

have nothing more to do with the consolidation or taking over by the State of either one of the medical colleges of this State unless these colleges are united. If that is done, then I would advise this society to get behind it as a body and put it on the high plane it should be. Also try to get an endowment fund for its maintenance.

It is my opinion that the medical colleges of this State have done more to disorganize medicine than any one thing in the State at the present time. I am sorry to say that some of the faculties and friends of these schools, consciously or unconsciously, try to line up the members of this society upon one side or the other. It does not make any difference whether they want to be lined up or not. This is no hasty conclusion of mine, but I arrived at it by my own observation and by talking with other members of the society, who, I am sorry to say, believe as I do about this matter.

Medical Education and Medical Licensure. I have been talking with members of our State Examining Board, and they assure me they are ready to make an advance along these lines at the present time. I ask you as a society to stand behind this Board and assist them in every way possible to gain this end, by seeing that the very best avail-

able men are kept on this Board in the future, as in the past.

I would suggest that these examinations be made more practical by including—

1. Practical laboratory and clinical tests in the examination of candidates for license to practice medicine. The written examination, as given in the majority of states, can be passed by any intelligent person who may have spent a few brief weeks in the study of quiz compends or in some of the shrewdly conducted quiz classes. The present written examination is not an actual test of a man's fitness to practice medicine, and such an examination could be passed by a man who had never made an experiment in a laboratory, who may have never looked through a microscope, or who may have never examined a patient. Again, the examinations for license to practice medicine in the United States are much easier than those required in some other countries. This fact tends to increase the number of foreigners who flock to this country, including a considerable number who probably could not secure licenses at home.

2. A single portal to the practice of medicine. Individuals who are to treat human ailments are alike in two respects. In the first place, they must make diagnoses in order to recognize what they are endeavoring to treat, and, secondly, what they may fail to do in certain cases, even as much, possibly, as the things they do, may mean the life or death of the patient. For these reasons everyone who is to treat human ailments, regardless of the particular methods employed, should be required to have a thorough training in the fundamental branches of the medical course. The objection to medical sects, therefore, is not so much because they are sects as it is that they enter the medical profession with a smaller amount of preliminary and medical training than do regular physicians.

Inebriate Hospital.—I want to make a plea for the necessity of a State hospital for inebriates, cocain, morphine and other drug fiends—not only to the medical fraternity, but to the temperance people as well—after the plan of the Iowa and Minnesota laws. I shall be very brief in this, and shall state a few facts that I hope will be suffi-

cient to get the people of this State to give this question a little study.

RESULTS ACCOMPLISHED.

I quote from the Superintendent's second biennial report, State Hospital for Inebriates, Knoxville, Iowa, for period ending June 30, 1908:

“For the purpose of determining what real practical results could be claimed for the work of this institution for this biennium, we conducted the following investigation. We mailed circular letters to the informant or correspondent in each case committed during this biennial period, containing the following questions:

1. In your estimation, was the case in question in any way benefited as a result of his commitment?
2. Has this party resumed his old habits since leaving the institution?
3. If so, how long after leaving the institution did this occur?
4. Has the habit, since resumed, been as bad as formerly?
5. What would you say as to the effect of his commitment upon other uncommitted cases in your community?
6. Was this case one that came voluntarily, or was he compelled to come?

We mailed 774 of these letters and received 365 replies. Fifty-nine letters were returned unclaimed. This left 350 who received the letters but made no reply. Upon further investigation we found that 105 of those whose informants made no reply were making regular monthly reports through their district clerks, according to law. Of the 365 replies, there were 38 who reported that the patient had never returned home and that the informant had lost all trace of him. This left 327 of whom we have definite reports. Of this number, 214 are perfect, never having relapsed; 54 are greatly improved, not having drunk but once or twice; 29 relapsed after a year or two, but not so bad as before; 30 began drinking at once, and of these 8 are said to be worse than before commitment.

This gives us the following percentages: Of the 327 actually reported, 65 $\frac{3}{4}$ per cent were cured; 16 $\frac{1}{2}$ per cent, although not entirely cured, were greatly benefited, and

were living sober lives at the time reported; 8½ per cent had relapsed after one year; 9 per cent were not benefited at all, and 2 per cent among these were worse than before commitment. Of the entire number treated (774), the 214 known to be cured, plus the 105 who are making regular monthly reports, but whose correspondent failed to reply, give us 41½ per cent cured and living up to their parole.

The replies to the circular letter are on file in the office of the institution, and are open for inspection. Many wrote very grateful letters for the help that had been given, and wished that others who are in need might continue to come for relief. Some of these replies were from business men and county officials, others from grateful wives and mothers, and all from those who were influential in bringing about the commitment; therefore, I consider them reliable.

With the improved equipment which we hope to have in the near future, together with the needed amendments or further enactments for the more satisfactory working out of the legal side of this question, the settling down to a more solid foundation that naturally comes from the fact that we are past the experimental stage, and the increasing public sentiment in our favor, I am very hopeful, as well as sanguine, as to the future of this work in Iowa.

Table No. 10, giving ages when the habit began, is as follows:

	1906-07	1907-08	Total
Under fifteen years.....	25	30	55
Fifteen to nineteen.....	89	124	213
Twenty to twenty-four.....	122	106	228
Twenty-five to twenty-nine..	66	50	116
Thirty to thirty-nine.....	53	44	97
Forty to forty-nine.....	23	27	50
Fifty to fifty-nine.....	4	2	6
Sixty to sixty-nine.....	0	0	0
Seventy years and over.....	0	0	0
Unknown	3	6	9
Total	385	389	774

In my opinion, it seems that the above facts are enough to convince anyone of the necessity of such an institution, when you see that these habits are formed in nine-tenths of the cases between the ages of fifteen and thirty-nine—in the constructive and reproductive period of man and woman, when they are rearing their families and making their fortunes.

Through the efforts of Dr. C. P. Meriwether, editor of the Journal, the optometry

bill which was introduced in our legislature was killed, which is very much to his credit.

I want to congratulate this society and the doctors of Montgomery County on coming out for organized medicine.

In conclusion, I want to thank the society for listening to this fragmentary address.

THE FAMILY PHYSICIAN, THEN AND NOW.*

T. F. Kittrell, M. D.,
Texarkana.

The family physician was not so many years ago the leading man of his community. He was consulted on matters of importance in nearly every line, from politics to medicine, and was usually quite willing to give advice. If he was an old man, his closest friends called him the "Old Doc;" if younger, he was called "Doc." He was usually very outspoken, and was much given to telling people that they should or should not do certain things, and when his orders were not carried out his righteous indignation was something terrible to behold, although beneath his rugged, forbidding exterior he was usually as gentle and tender as a woman, and this fact was well known to most of his patients. His library was not expensive, consisting of a few voluminous volumes. His postgraduate work was only what he learned at the bedside, and yet how well he handled his cases! That shrewd common sense, without which no physician can do much, was his mainstay. He was a close observer; he was his own dispenser, and carried a well-selected stock of drugs. In those days he did everything.

When I was a youngster I used to see our old family physician take a patient who had trachoma, set him down on the platform at the country store (this store was also the postoffice and railway station), and take a lump of sulphate of copper, shape it like a pencil, and, after everting the lids, rub vigorously—this treatment going on at intervals for weeks and months. Another family physician of the "old school" (the man with whom a brother of mine formed a partnership), had a penchant for extracting teeth. He was an expert at this kind of

*Chairman's Address to the Section on Practice, of the Thirty-fifth Annual Session of the Arkansas Medical Society, held at Fort Smith, May 3-6, 1911.

work; he was also very deaf. If a patient with an aching molar met him in the road he took a delight in getting off his horse, having the victim sit on the root of a tree, or any convenient place, and then applying forceps, pulling to his heart's content. He sometimes got the wrong tooth, but because of his deafness the patient could not make him understand what he was remonstrating about until it was all over.

These grand old men—the pioneers of our profession, gentlemen—we should take off our hats to them. They had many virtues which we should emulate. They held the honor and the ethics of the profession up as their god. Sooner they would have died than do a little, mean thing.

I can look back over the few years that I have been a physician and can see those grand old men. They had their faults and shortcomings, just as we have and just as our children and our children's children will have; but in the main they were honorable, just and true, and, with the lights they had before them, they were then up-to-date. They often died poor, because they preferred the healing of the sick to the collection of bills. No charge of commercialism could be laid at their door.

The time has come, gentlemen, when we must do more than our forefathers did. We must bestir ourselves lest we fall behind in this progressive age. Great discoveries are being made in our profession, and we must make use of them. I do not mean that we must adopt every fad that is brought out, for we all have seen fads come and go, but we must try to separate the good from the bad, the useful from the useless. We must have an open mind; be ready to be convinced, but not gullible. We must make use of the instruments of precision, the blood pressure apparatus, laboratory methods (examination of the blood, sputum, feces, urine, etc.); our clinical examinations must be more and more thorough. We should keep case records in order that we may become more systematic, and that in the years to come we may go over our cases and refresh our memories.

Another ally of great importance, both to our patients and to ourselves, is the trained nurse. She it is who carries out our orders. She is on the "firing line" while we are attending others. She it is who gives us a comprehensive, though brief, synopsis of all

that has transpired in our absence. I do not see how we ever got along without her.

We are called upon now to protect our communities from preventable disease, and in no field can we do better work. The public is aroused in matters pertaining to the prevention of disease, and they are demanding that we do our part, and I am glad to say that our profession has never failed to respond nobly to every demand. Witness the self-sacrificing Lazear, a martyr to yellow fever, and Ricketts, who died while trying to learn more of the deadly typhus. These are only two recent victims. Many others have gone before.

Gentlemen, this society is practically made up of family physicians. I suppose nine-tenths of us are family physicians. At least a part of our time is devoted to internal medicine. Let us then try not to be what a lawyer friend of mine called a physician whom he was questioning on the witness stand. To the jury he sneeringly called him "one of those little thermometer doctors," with the accent on the thermometer; said that was all he knew, was to stick a thermometer in a patient's mouth. Let us be broad-minded, conscientious and well informed, both by reading and by post-graduate work. Let us be true to our patients, true to the public, true to our families and to ourselves.

In this age we cannot rely solely on our own personal experience, as most of our forefathers did; we are absolutely compelled to take post-graduate work, thus seeing many cases in a short time which we would not see in many years at home. Our patrons have a right to demand this of us, and they do. Let us try to be so well-balanced that we will not be one-sided. We should, while trying to reap just rewards for ourselves, not allow the bacillus of commercialism to get into our systems, for few physicians or men in any calling have a sufficiently high moral opsonic index to overcome this terrible malady.

PROGRESS IN DERMATOLOGY AND SYPHILOLOGY.*

S. E. Steer, M. D.,

Hot Springs.

Entering into a consideration of the progress made during the past year in the field of medicine most interesting to this section,

*Chairman's Address to the Section on Dermatology and Syphilology, of the Thirty-fifth Annual Session of the Arkansas Medical Society held at Fort Smith, May 3-6, 1911.

I desire to call the attention of its members to the following items:

A gradual decline in the profession in the use of the gonococcic bacterins and vaccines. The first were welcomed some time ago as a great boon to those afflicted with one of the greatest curses of our modern life, gonorrhea, and were particularly used in cases which were so unfortunate as to result in prostatitis, and, finally, gonorrheal rheumatism.

It seems to your chairman that the profession is becoming more and more discouraged over its failure to secure results, and has changed to the use of a mixed injection, more especially in staphylococcus, in doses double and treble those originally in use.

What the next year will bring forth is a matter of conjecture, but the outlook in this matter appears rather discouraging, considering the broad field of promise originally open to the miserable victim of chronic gonorrheal infection. We must continue to use our older methods in conjunction with the vaccines if we continue to use them at all. The same appears to be true of the methods of treating acne, etc., by means of vaccination. We have had serious discussions in the past as to the advisability of using autogenous or stock vaccines. But (and there is warrant for using a large "B") when we come to consider our progress in dermatology during the past months, in that more attention than ever before has been paid to the other conditions, such as autointoxication, faulty metabolism, insufficient or excessive secretion of the so-called glands, insufficient elimination of the several emunctories, as skin, kidneys, intestines and lungs. I desire particularly to call attention to the elimination from the respiratory tract in the management of skin diseases; a subject which I believe has been brought largely to the attention, not only of dermatologists and syphilologists, but to the entire profession, mainly by the so-called tuberculosis crusade.

To return to the purely scientific viewpoint, the results which have been obtained by the Wassermann reaction seem to have resulted in the greatest advance in our diagnosis of syphilis. At the beginning we were naturally more or less timid, and possibly I might say skeptical; but each year has proved that this is the great test, and in

many cases the only test, provided it is properly used. No longer are you in doubt if you can persuade a patient to wait a reasonable time to know absolutely if you have a true luetic infection or a mere benign local manifestation. The profession has, during this year, come to use in a practical manner the Wassermann reaction much more generally and to regard it as a criterion almost infallible, provided there has been no previous treatment to vitiate its results.

Since the sun last set upon a meeting of this section there has occurred the greatest excitement amongst the laity and the profession, almost a hysteria among the people, regarding the discovery, by the German professor, Erlich, of an alleged cure for syphilis. The magazines and the daily papers have told the wonders of "606," saying that one injection would cure the great scourge. The demand upon the physician by the public to use this drug has been great. From reports, both in America and abroad, this remedy appears to have already reached its zenith of popularity, and is being gradually restricted for use in such cases which are particularly suited to its employment, along with our older and more tried therapeutic measures. However, the public press notices regarding salvarsan have even exceeded those of the great Koch's tuberculin of years ago, and only time will show whether Salvarsan, the new drug of Prof. Erlich, will result in more good to the world by virtue of its therapeutic value than harm from the false confidence inspired by the public prints in the minds of those afflicted with lues, who have seen a temporary abatement or abolition of symptoms after its use and will conclude that they have been cured because they see no sign of the disease.

CHAIRMAN'S ADDRESS TO THE SECTION OF OBSTETRICS AND GYNECOLOGY.

L. J. Hesterly, M. D.,
Prescott, Ark.

It is with much pleasure that I come before you on this occasion, and I feel that it is an honor to represent any section of the Arkansas State Medical Society—especially the section on Obstetrics and Gynecology—because I think it the most important sec-

tion to the general practitioner. We are so often called upon to attend the parturient woman, and feel the responsibility of two lives resting upon us; also, the future health of the mother—realizing fully what it means to make a mistake at this critical time.

We have anticipated the pleasure of this occasion for a year, and have many times recalled the pleasures of our annual meetings. Many of the happy faces that have greeted us on these occasions have gone to the doctor's reward, but we have added each year to our list those who add to our pleasure of this occasion, and we have had the same warm words of welcome to greet us. Then let us enjoy the pleasures of today—at least today, whate'er tomorrow brings.

This is our annual occasion of putting aside the cares of professional life. We

have come to speak to each other of the actions that have characterized us as doctors; to speak of the lives we have saved and to speak of the lives we have lost; to offer each other our congratulations or sympathy, and to remember that it is well on this occasion to enter into a free discussion of each paper that is offered.

I shall not attempt to enter into the progress made in the science of gynecology or the discoveries made to make labor easy. I shall leave that for those who follow with their papers and who are more capable of giving you that information.

Gentlemen, I congratulate you on meeting with the Sebastian County Medical Society in Fort Smith. I want to thank each gentleman of this section for contributing his paper on this occasion.



MORGAN SMITH, M. D.
PRESIDENT ARKANSAS MEDICAL SOCIETY, 1911-12

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OF THE

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A schedule of rates will be furnished upon request.

CHANGE OF ADDRESS.

Change of address will be made if the old as well as the new address be given.

ANONYMOUS COMMUNICATIONS.

No anonymous communications will appear in the columns of this Journal, no matter how meritorious they may be.

NOTICE.

All changes of address should be sent to Dr. C. P. Meriwether, secretary of the State Society, as he furnishes the mailing list each month of our members. All communications for publication should be sent to the editor not later than the 5th of each month.

Editorials.

OUR PRESIDENT.

Dr. Morgan Smith was born in El Dorado, Ark., in 1868, and was educated in the public schools of El Dorado and the University of Arkansas. He graduated from the Medical Department of the University of Arkansas in 1889, and from Tulane University in 1904. He practiced his profession in El Dorado previous to moving to Little Rock in 1904. After moving to Little Rock Dr. Smith was elected to the faculty of the Medical Department of the University of Arkansas as professor of physiology and diseases of children. In 1907 he was elected secretary and editor of the Journal for the Arkansas Medical Society, serving in these capacities until 1911, when he was elected to the presidency of the State Society. Dr. Smith has also enjoyed the distinction and honor of being sanitary director for the State Board of Health

in its efforts to eradicate hookworm disease. He is a member of the American Association for the Advancement of Science, the Pulaski County Medical Society, American Medical Association and physician to the Deaf Mute and Blind Schools.

Dr. Smith is quick to grasp opportunities and has the ability to accomplish results, never losing sight of the high ethics of the medical profession and his duty to his fellow-practitioner. He has ever stood ready and willing to serve the profession in the upbuilding of medical science. His work over the State as lecturer on sanitary measures has been most efficient. So enthusiastic and effective did he work in the recent legislature for the passage of the public health bill that he might well be termed the father of the bill. He was also author of the Medical Practice Bill which was enacted in 1909, known as the Turner Bill. His strong personality, his fairness in dealing with his fellow-men, his enthusiastic and untiring efforts for the advancement of medical science and his active and efficient service as secretary of the Society and editor of the Journal have won for him the respect and confidence of the medical profession. He is in every respect deserving of the honor of being president of the Arkansas Medical Society, and we prophesy that he will be remembered as one of the most popular presidents the society has ever had.

PUBLIC HEALTH BILL.

Much has been said and written with reference to the public health bill recently passed by the legislature. When the bill was first proposed there seemed but a shadow of a chance of its becoming a law. Neither branch of the legislature had had occasion to familiarize themselves with the conditions warranting the necessity of such a measure. The medical profession had for years realized the urgent necessity for a public health law giving to the citizens of Arkansas such protection as conditions demanded. Not only did conditions demand it from the standpoint of sanitation, but progress along commercial and other educational lines as well. We had absolutely no laws governing sanitary conditions in the State. We had no means or methods of gathering statistical reports of births and deaths. We had no official data regarding the prevalence or incidence of infectious and contagious diseases.

Now comes the new era of sanitation and sanitary education in Arkansas. We will soon have a well-organized State Department of Health, with the necessary power and authority to bring about better sanitary conditions over the State. Thus we hope to check the rapid spread of tuberculosis, smallpox, scarlet fever, diphtheria, hookworm disease, cerebro-spinal meningitis, acute poliomyelitis and many other diseases which take the lives of the innocent and bring grief and sadness into the homes of the poor and helpless.

We have for years been at a loss to know why our legislators could not see the necessity of health laws as we see it. In our recent efforts to secure the passage of this bill, coming in direct contact with the different members of the legislature, we soon learned that a large part of the fault was with the medical profession in not having educated the people of the State along the lines of preventive medicine. Every county medical society should see that the proper instructions, by some well-informed physician, be given in every college, high school and public school in the county. No better text could be selected to talk from than the public health bill recently passed by the legislature. Probably no better methods could

be adopted than for the county societies to pass a resolution pledging coöperation with the officers of the State Department of Health for the arrangement of instruction in all public schools in the State. Whatever our plans of operation may be, let us ever keep in mind our duty to our fellow-man, and especially to the innocent and unprotected boys and girls of the community. They are striving to become great men and women, and no greater possession could be bestowed upon our boys and girls than health and a knowledge of how to preserve it.

CITY HOSPITAL FOR HOT SPRINGS.

We are glad to note that Hot Springs will likely have in the near future a city hospital. In the Sentinel-Record of June 3rd there was an editorial with reference to a resolution offered by Alderman Dr. L. R. Ellis outlining plans whereby the city could well afford, with certain available assistance, to establish a hospital which would not only care for the unfortunate sick of the city, but reflect credit on that city. The matter was referred to the Committee on Ways and Means for an investigation of details, with instructions to report at the next meeting.

PROCEEDINGS

OF THE

Thirty-fifth Annual Session of the Arkansas Medical Society

HELD AT

Fort Smith, May 2, 3, 4 and 5. 1911.

HOUSE OF DELEGATES.

First Day—Tuesday Morning.

The House of Delegates was called to order by President Dorr at 9 a. m. An invocation was delivered by the Rev. H. W. Bartels of Fort Smith, after which Dr. J. C. Amis, president of the Sebastian County Medical Society, spoke the following words of welcome:

WELCOME ADDRESS.

Mr. President and Members of the House of Delegates:

It gives me pleasure this morning to address you in behalf of the Sebastian County Medical Society. I congratulate you of the House of Delegates as fellow-workers in a great, noble and unselfish profession, the representatives of the various county societies which together constitute the grand State Medical Society. But I would come to you this morning with a special message of friendship and welcome from every member of the Sebastian County Medical Society. We have looked forward with pleasure to the time of your coming, and now we sincerely hope that each of you will enjoy this occasion to the fullest of its limit, and that no cloud will float across your pathway to mar the pleasures of any of you during your visit to our city. I think these annual occasions are well worth while, not only for the benefit that is derived from the discussion of scientific subjects or the pleasures of the social side of this occasion, but as a means of rejuvenation as well. I contend that it is not well for any man to dwell on the sad and serious things of life too long, but at intervals to cut loose and allow himself to flit away into the broad and sunny places where flowers bloom by the brooks that babble and sparkle in perpetual sunshine, and romping, healthy children laugh and play and chase the butterflies of reality and fancy across meadows forever green with the tender blades of hope, and join ourselves with them, and allow them to carry us on and on amid the bustling, bounding, healthful scenes of joyous children; or to soar away up on the eagles' wings above life's lowering clouds and raging storms, and there remain where fields stand forth in cloudless beauty and happiness robed in purest azure; stroll along streets paved with glittering stars, and gladness, and goodness; romp hand in hand along the moon-lit milky way until all the clouds and storms have passed, before returning to our work again.

My mission today is to say to this House of Delegates words of welcome for this occasion, and you know when a man has an elegant home, a beautiful wife and accomplished daughters, and everything that goes to make up for satisfaction and contentment, how glad he is to have his friends with him,

and with what graciousness he bids them welcome to all the pleasures of the occasion. So we, of Sebastian County, feel concerning our home.

It is a cardinal doctrine with all of us that the Lord devoted five and a half days of His creative energy to the creation of Sebastian County; the remainder created He in a half day and rested on the seventh, as we are taught in the Holy Scriptures, but that He rested in Sebastian County. We think it was on this part of Arkansas that the Heavenly Host looked down when the morning stars sang together and all the sons of the Most High shouted for joy; that it was here that the mocking bird was turned loose from off the hills of Paradise, and was so charmed with his surroundings and so filled with gladness, and so overcome with glee, that he naturally broke forth with his song, unapproachable in the grandeur of its music and the beauty of its sentiment, and today sings his sweet song of Sebastian County. Remember that! That is the song of the mocking bird. It is simply wonderful what the Creator did to this part of Arkansas to make it beautiful and attractive as the abode of man, and to put into it all the necessities and almost all the luxuries known to Him.

Why, here our city is situated at the confluence of two beautiful rivers, along whose banks spread away broad and attractive acres as fertile as the valley of the Nile, and all around are mountains, rock-ribbed and as ancient as the sun, where our orchards are the realization of the dreams of him who dreamed of the Paradise lost by the first created human beings, and whose fruits are so beautiful and so luscious that those of us who are permitted to taste them can hardly blame old Adam very much for taking one, even though they were forbidden. (Applause.)

These attractions naturally drew to them men of strength and wisdom, and women of beauty and culture, who gave to our community a system of schools equaled by but a few and surpassed by none, and a hospitality that simply has to be experienced to be appreciated.

Yes, gentlemen, we contend and feel perfectly justifiable in the contention that our roses are the grandest, our violets are the sweetest, our lilies are the prettiest and our music is the finest, our sunshine is the brightest and our welcome is the warmest in all the land. So, on behalf of Sebastian County Medical Society I bid you one and all welcome to the freedom of our city, the grandeur of our roses, the sweetness of our violets, the beauty of our lilies and the pleasure of our music, the splendor of our sunshine and just a little of our moonshine (Laughter).

To our homes and our firesides
And our hearts' warmest insides.

To all of these and more I bid you welcome—thrice welcome (Applause).

APPOINTMENT OF COMMITTEES.

Credentials Committee.

President Dorr appointed on the Credentials Committee Dr. Wm. V. Laws, Hot Springs; Dr. M. L. Norwood, Lockesburg; Dr. George F. Hynes, Fort Smith. A recess of ten minutes was taken for the purpose of giving the Credentials Committee time to examine the delegates' credentials.

The House was called to order by the president, and Dr. George F. Hynes, chairman of the Credentials Committee, reported thirty-two delegates present.

Dr. W. V. Laws of Hot Springs made a motion, which was carried, that the reading of the minutes of the last annual session be dispensed with, as the minutes were published in the June Journal.

Reference Committee.

President Dorr appointed a Reference Committee of the following members: Dr. T. J. Stout, Brinkley, chairman; Dr. W. A. Snodgrass, Little Rock; Dr. J. T. Clegg, Siloam Springs.

PRESIDENT'S ADDRESS TO THE HOUSE OF DELEGATES.

The next order of business being the president's address, Second Vice-President Thad Cothren, of Walcott, assumed the chair while President Dorr read the following address to the House of Delegates:

"It gives me great pleasure to formally open the thirty-fifth annual session of this society.

Public Health Bureau.

Owing to the status of the State Department of Health and Vital Statistics Bill, now pending in the legislature, should the present committee not succeed in getting it passed, I would advise that the next committee try to get one of a similar nature through the next legislature two years from now.

Inebriate Asylum.

I would advise that this society use its influence in getting an inebriate asylum established and one including the cure and treatment of cocaine and drug fiends. I would suggest such an institution as those now established in Iowa and Minnesota. If you find this cannot be done, you should try to get a ward in the new addition of the hospital for nervous diseases, if this is built, for these unfortunate people. By studying the statistics of these institutions you will find that a great many of these people are reformed.

Relief for Disabled Members.

I hope you will not overlook a provision for the disabled members of our profession, as contemplated in the recommendation of the report of the Committee on Relief Fund and Tuberculosis Sanatorium for Physicians, made to the American Medical Association last year and published in the Journal June 18, 1910, page 2081. I would recommend that you investigate this report and do what you think best.

Consideration of Committee Reports.

I would advise you to note especially the reports of your committees and give them such attention as in your judgment they deserve.

I have been asked to recommend that the House of Delegates send the Editor of the Journal to a meeting of Editors of Journals of State Societies,

which will be held in Los Angeles in June, during the meeting of the American Medical Association. I did not make this recommendation in my address, for the reason that I understood that the society was not financially able to bear this expense, but since arriving at Fort Smith I am informed by the secretary that our treasury can bear the expense, so if you see fit to act upon the suggestion, do so."

On motion the President's address was referred to the Reference Committee.

REPORT OF COMMITTEE ON ARRANGEMENTS.

Dr. J. G. Eberle, chairman of the Committee on Arrangements, reported as follows:

"I wish to say that the Section on State Medicine and Public Hygiene will hold a public meeting at the auditorium of the high school at 8:30 this evening. A symposium on tuberculosis has been arranged, papers being contributed by Dr. J. T. Southard, Fort Smith; Dr. J. T. Clegg, Siloam Springs; Dr. J. S. Shibley, Booneville. After the reading of the papers a general discussion will follow.

"Tomorrow evening at 8:30 there will be a public reception given to the members of this society at the Casino in Electric Park. There are no printed invitations to this reception.

"Thursday evening at 9 o'clock there will be a banquet at the Hotel Goldman. Besides these functions several special features of entertainment have been provided for visiting ladies, and the chairman would be glad to have the names and local addresses of the ladies.

"All meetings of the House of Delegates, after today, will be held in the county court room, just across this hall, the room being reserved for the general sessions. Your committee meetings will be held in the grand jury room, on this floor, at the extreme end of the hall."

MEMORIAL TO THE LEGISLATURE.

The secretary called attention to the fact that Senate Bill No. 451, known as the Public Health Bill, would probably come up in the lower house for final action today, and in view of the activity of the opponents of the bill, suggested that telegrams be sent to the Governor and the Speaker of the House, urging their influence in the passage of the bill. It was furthermore suggested that each member in attendance wire his representative to support the bill.

In view of the strong promises made by the Speaker of the House that he would call the bill up today, and for fear of causing friction, President Dorr doubted the wisdom of sending telegrams.

The Secretary—I have prepared two telegrams, one to Governor Donaghey and one to Speaker Milwee, and move that they be forthwith transmitted in the name of this society.

"The Arkansas Medical Society, in annual convention assembled, speaking for 3,600 physicians and in the name of 1,500,000 citizens of the State of Arkansas, most respectfully urge you to use your influence toward the passage by the House of Representatives, now in session at Little Rock, of Senate Bill No. 451, known as the Public Health Bill."

Dr. L. H. Barry of Hot Springs offered an amendment to the motion that the telegram be sent only to Governor Donaghey, for the reason that the speaker might think the president was not acting in good faith with him. The motion was seconded. Dr. George F. Hynes of Fort Smith remarked that the object of the telegrams was merely to strengthen the hands of the speaker who wanted to feel

that somebody stood back of him. "When the great prophet Moses stood up and his arms got tired," Dr. Hynes said, "men were called upon to hold them up; now, in this telegram which we are sending, 3,600 physicians and 1,500,000 people are holding up the arms of the speaker."

Dr. J. S. Shibley, of Booneville, suggested that the telegrams be changed to the form of a memorial to the General Assembly, so that it could be read from the clerk's desk, that all the members of the House might hear it read. The secretary suggested that the telegrams could be addressed to the Speaker and the members of the House of Representatives, and they would then be read by the clerk.

Dr. Barry's amendment was lost and the original motion was carried.

The report of the secretary was the next order of business, but on account of some additional county reports having come in since the House convened, the report was passed to the afternoon session.

President Dorr—I am advised by the secretary that the standing committees have not yet filed their reports, and, there being no further business this morning, a motion to adjourn will be entertained.

Dr. J. S. Shibley of Booneville, Superintendent of the Tuberculosis Sanatorium, in the name of the Board of Trustees, invited the society to visit the sanatorium. He especially desired the physicians of the State to see what has been accomplished through their efforts, and requested a thorough inspection of the buildings and an examination of the methods in practice at the institution for the treatment of tuberculosis. The invitation was accepted and a vote of thanks expressed.

On motion the House of Delegates adjourned to meet at 2 p. m.

HOUSE OF DELEGATES.

First Day—Tuesday Afternoon.

The House of Delegates was called to order at 2 o'clock by President Dorr.

Dr. George F. Hynes, chairman of the Credentials Committee, reported the presence of four more accredited delegates. The secretary called the roll and a quorum was found present.

SECRETARY'S REPORT.

Dr. Morgan Smith, secretary, read his annual report, which was as follows:

To the Members of the House of Delegates of the Arkansas Medical Society:

In compliance with Chapter VI, Section 4, of the constitution of this society, I beg to submit the following report for your consideration:

Component Societies.

This society is now composed of 58 component societies, four less than when I made my last annual report. The following counties have not paid their annual dues, and according to Chapter IX, Section 14, of the by-laws, are suspended: Columbia, 12; Craighead, 14; Chicot, 9; Randolph, 15. Total loss in membership, 50.

The following counties are yet unorganized: Madison, Stone, Van Buren, Izard, Pike, Cleburne, Fulton, Scott, Cross, Crittenden, Poinsett, Newton, Marion. Total, 13.

An organization in each of these counties would not only mean an addition of at least 100 members to the society, but the organization could be used to great advantage in influencing needed medical legislation. Strong efforts should be made by the councilors to bring these counties into line before the next annual session. It would be a matter of congratulation to know that every county in the State had a live society.

Membership.

The total membership this day is 856, a loss as compared with 1910, 50 being chargeable to those counties held suspended for non-payment of annual dues, namely, Columbia, 12; Craighead, 14; Chicot, 9; Randolph, 15.

Reports by councilor districts: Loss—First, 1; Second, 6; Fourth, 2; Fifth, 6; Seventh, 4; Ninth, 1. Total, 20.

Gain—Sixth, 1; Eighth, 12; Tenth, 5. Total, 18. Total loss, 2, making a grand total loss of 52 members.

I wish to reiterate and strongly emphasize what I said in my previous report, that there should be an amendment to the constitution fixing a fiscal date and establishing a uniform day on which the annual election of component officers shall be held. A resolution was passed by the House of Delegates at the last meeting, suggesting a date in December for the election of officers, but it was not generally observed. Suggestion is not sufficient, and legal action should be taken. I consider this a most important matter that should receive your earnest consideration.

Not only has the society sustained a loss in membership, but I believe scientific interest in the component societies was never at a lower ebb. A large majority of societies meet only once a year—perfunctorily to elect officers and pay dues. This society cannot maintain that high standard of scientific efficiency until membership is based on those honorable purposes as expressed in the preamble to our constitution, namely, to-wit:

1. To extend medical knowledge.
2. To elevate the standard of medical education.
3. To secure the enactment of and enforcement of just medical laws.
4. To promote friendly intercourse among physicians.

5. To enlighten and direct public opinion in regard to the great problems of State Medicine, so that the profession shall become more capable and honorable within itself and more useful to the public, in the prevention and cure of disease and in prolonging and adding comfort to life.

Such very worthy purposes should be held constantly before the profession, and this society should, if there can be found any way, employ some person to thoroughly canvas the State in the interest of our cause. With 13 counties unorganized, 4 suspended and 58 in need of rejuvenation, there would be at least one year's work for such an organizer. Iniquitous leagues with pernicious principles are secretly undermining the public faith and you should take cognizance of their diabolical machinations.

Financial Statement.

I have received from the secretaries of component societies, on account of annual dues, \$1,719.00. From C. P. Meriwether, editor, \$686.78. Total receipts, \$2,405.78.

Disbursements.

Hereto attached is a list of the warrants issued on the treasury, and are as follows:

Voucher No. 228.	Dr. C. P. Meriwether.....	\$ 400.00
Voucher No. 229.	Dr. C. P. Meriwether.....	16.00
Voucher No. 230.	Dr. C. P. Meriwether.....	8.00
Voucher No. 231.	Morgan Smith, secretary	450.00
Voucher No. 232.	J. S. Wood, treasurer.....	5.50
Voucher No. 233.	Morgan Smith, secretary	10.00
Voucher No. 234.	Central Printing Co.....	145.30
Voucher No. 235.	Central Printing Co.....	95.90
Voucher No. 236.	M. S. Bratton, P. M.....	10.00
Voucher No. 237.	Parkin & Longley.....	50.00
Voucher No. 238.	Central Printing Co.....	148.90
Voucher No. 239.	Parkin & Longley.....	1.15
Voucher No. 240.	Spott & Jefferson.....	25.00
Voucher No. 241.	Noel Loeb	59.60
Voucher No. 242.	Central Printing Co.....	125.25
Voucher No. 243.	Little Rock Tent and Awning Co.	4.90
Voucher No. 244.	Central Printing Co.....	83.16
Voucher No. 245.	W. S. Bratton, P. M.....	10.00
Voucher No. 246.	Central Printing Co.....	86.80
Voucher No. 247.	Underwood Typewriter Co.	25.00
Voucher No. 248.	Morgan Smith, secretary	10.00
Voucher No. 249.	H. H. Niehuss.....	11.00
Voucher No. 250.	Central Printing Co.....	87.30
Voucher No. 251.	Central Printing Co.....	68.30
Voucher No. 252.	Central Printing Co.....	82.08
Voucher No. 253.	W. S. Bratton, P. M.....	10.00
Voucher No. 254.	Central Printing Co.....	82.58
Voucher No. 255.	R. L. Polk & Co.....	6.00
Voucher No. 256.	Central Printing Co.....	85.32
Voucher No. 257.	Dr. S. A. Southall.....	3.50
Voucher No. 258.	Morgan Smith.....	35.00
Voucher No. 259.	Central Printing Co.....	77.85

Total\$2,319.39

Balance on hand.....\$1,995.49

The assets of the society in possession of the Secretary are as follows: 1 Underwood typewriter, 1 typewriter desk, 1 bookcase, 1 stool, 4 sections of bookcases, 12 letter files, 1 seal, 1 filing cabinet. Total value, \$100.00.

On account of the worn condition of the old typewriter, I exchanged it for a new one, paying a difference of \$50.00.

I have kept the books of the office in as good condition as my clerical ability permitted, and have discharged all the duties pertaining to the secretaryship as efficiently and promptly as possible. The correspondence has been exceptionally heavy for this last year.

There have been a few complaints made to me. Some errors have been traceable to my oversight, for which I wish to assume full blame.

I wish to thank the officers and members of the component societies for valuable assistance rendered my office.

Respectfully submitted,

MORGAN SMITH, Secretary.

By motion the report was referred to the council.

TREASURER'S REPORT.

Dr. J. S. Wood of Hot Springs, Treasurer, read the following report:

To the House of Delegates of the Arkansas Medical Society:

As your treasurer I beg leave to submit the following as my report:

Amounts Received from the Secretary.

May, 1910, cash on hand.....	\$1,907.10
November 28, by check.....	175.00
January 3, by check.....	100.00
February 24, by check.....	200.00
April 24, by check.....	1,594.08
May 1, by check.....	332.00
By cash	4.70

Total\$4,312.88

Amounts Paid Out.

Voucher No. 228.	Dr. C. P. Meriwether.....	\$ 400.00
Voucher No. 229.	Dr. C. P. Meriwether.....	16.00
Voucher No. 230.	Dr. C. P. Meriwether.....	8.00
Voucher No. 231.	Morgan Smith, secretary	450.00
Voucher No. 232.	J. S. Wood, treasurer.....	5.50
Voucher No. 233.	Morgan Smith, secretary	10.00
Voucher No. 234.	Central Printing Co.....	145.30
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Voucher No. 241.	Noel Loeb	59.60
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Voucher No. 256.	Central Printing Co.....	85.32
Voucher No. 257.	Dr. S. A. Southall.....	3.50
Voucher No. 258.	Morgan Smith.....	35.00
Voucher No. 259.	Central Printing Co.....	77.85

Total\$2,319.39

Balance on hand.....\$1,995.49

J. S. WOOD, Treasurer.

On motion the report was referred to the council.

REPORT OF COMMITTEE ON ARRANGEMENTS.

Dr. J. G. Eberle, chairman of the Committee on Arrangements, called attention to the public meeting to be held at 8 o'clock at the high school auditorium, and urged every member of the society to be present.

REPORT OF COMMITTEE ON STATE LEGISLATION AND PUBLIC POLICY.

The Secretary—Inasmuch as Dr. F. T. Murphy of Brinkley, chairman of this committee, is absent, and being more or less familiar with the work done by the committee, I take it that the members of this House would not object to a short statement covering the activities of the committee.

At the last annual session of this society, held at Little Rock, by special resolution this committee was charged with a specific duty, namely, to draft a bill providing for the creation of a State Department of Health, and to prosecute its passage by

the General Assembly. In accordance with this resolution, special conferences were held in Little Rock by the committee, and after full deliberation a bill was finally drafted which, in the opinion of the committee, fulfilled all the requirements of a model public health measure.

Valuable assistance and advice was rendered the committee by public health officials in many other states, and the bill represents the best features of the Indiana and Pennsylvania laws.

The bill was introduced in the Senate early in February by Dr. J. F. Hughes of Drew County, and was styled Senate Bill No. 198. It was read the second time, and made a special order one week later. When the bill was up for its final passage, Senator Holland, chairman of the Judiciary Committee, moved that the bill be referred to his committee, as in his opinion it was radical and was not favored by physicians.

By appointment our committee appeared before the Judiciary Committee and explained the provisions of the bill, apparently to the satisfaction of the members, and it was agreed at this meeting that the bill be reported back with the recommendation that it do pass. Naturally, we expected the bill to be called up at an early date, but the "miner and sapper" began their work. Objections to the bill soon began to reach the committee. These objections, upon investigation, were found to emanate from the National League for Medical Freedom, an organization composed of patent medicine interests, Christian Scientists, eclectics, homeopaths and others who opposed organized medicine.

The opponents of the bill were granted a hearing by the committee. Dr. E. H. Stevenson an ex-president of the Eclectic State Association and a high officer of the Arkansas branch of the National League for Medical Freedom, led the opposition. Dr. W. E. Green and Dr. W. B. Hughes, prominent homeopaths of Little Rock, and an unidentified American citizen, who "stood on the fourteenth amendment of the constitution of the United States," spoke vigorously against the bill, their objections being principally based on the principle of unfair representation on the board. They demanded that the bill be amended so as to include the appointment of homeopaths and eclectics on the Advisory Board. They also protested against the power given the health commissioner, that such power could and would probably be abused, and that life, liberty and happiness of the people would be jeopardized should the bill pass in its present form.

By the request of Senator Holland, chairman of the Judiciary Committee, Dr. Stevenson was requested to submit such amendments as in his opinion would remove the objectionable features of the bill, and that the bill would be held in the committee pending the receipt of the amendments. I do not know when these amendments were sent in by Dr. Stevenson, but I do know that the bill was held up from February 8 to April 5. I presume it took him that long to make up his mind just what amendments he desired, but I am inclined to think it was a studied effort on his part and the opponents represented by him to delay the bill so that it would be impossible to get action upon it at this session.

It took strong efforts on our part to ever get the bill reported from the committee, and to our surprise a substitute bill was brought in which contained several objectionable features.

The substitute bill is known as Senate Bill No. 451, the bill being written by Senator Friedel of Texarkana, and Senator Holland, of Fort Smith.

On account of the short time in which to get the bill passed through the House, we waived our

objections to the bill, hoping to reinstate the sections amended in the House. On final passage there were only three votes against the bill, namely, Senator Clerget, of Conway County, Senator Christian, of Boone County, and Senator Phillips.

The bill was promptly transmitted to the House and placed in the hands of Dr. Stokes, from Hempstead County. The bill was read twice, referred to the Judiciary Committee, of which Mr. Clyde Going was chairman.

Our committee appeared before the Judiciary Committee, and after explaining the features of the bill, was gratified to have the bill reported favorably with certain proposed amendments, namely, to restore Section 10 as it appeared in the original bill. This section provides for a Bureau of Vital Statistics and is modeled after the bill recommended by the American Public Health Association and endorsed by the Federal Census Department.

The officers of the Arkansas branch of the National League for Medical Freedom, domiciled at Fort Smith, were to have been present at this meeting in opposition to the bill, but on account of the death of a prominent citizen of Fort Smith they could not attend. They wired Chairman Going they "could not decently leave the city," and asked that a hearing be granted one week later. The chairman being in favor of the bill, and understanding the tactics of the opposition, asked that the bill be acted upon, and accordingly a favorable report was recommended. Many efforts were made to get the bill on its final reading, but on account of the many administrative measures pertaining to appropriations and revenues, it was impossible to call our bill up out of its order; however, the Speaker has promised that the bill will be called today, and I will say to you, if you never prayed before in your life, now is the time to pray.

I believe the bill will pass by a narrow margin, and if it does become a law it will place the State in the front rank of other States which have effective and comprehensive public health laws.

It is worth while to pay a few remarks to the opponents of this bill. I take it that you are all familiar with the history, objects and purposes for which the National League for Medical Freedom was organized.

When this bill was introduced in the Senate, so the information goes, a gentleman from Kansas City came over to Fort Smith and organized the Arkansas branch of the National League for Medical Freedom, and selected a full corps of officers, among whom were Dr. E. H. Stevenson and Dr. J. W. Laws, two eclectics; Mr. Herman Beck, a Christian Scientist, and Mr. Lick, a printer, all of Fort Smith; Dr. W. E. Green, a prominent homeopath of Little Rock, and Dr. R. L. Smith, an eclectic, of Russellville.

It seems that the Fort Smith Times-Record at once espoused the cause of this organization, and through its editorial columns poured out the most absurd and mendacious vaporings that has ever come under my observation. I have never seen so many actual and implied lies condensed in so small a space, and, should the editor turn his pen to this style of literature, he would make Cagliostro turn over in his Italian grave. I have copies of these editorials, as well as other articles signed by individual members of this League, all inspired by a pseudo-scientist and un-Christian propagandist, and I trust that the editor of the Journal will find space in an early issue to reproduce these diatribes.

These editorials and articles were printed in pamphlet form and have been distributed all over the State, and have found their way back to the members of the legislature, accompanied with a

petition praying for the defeat of this bill. It is to be inferred that the signers were orthodox members or sympathizers with this Medical Freedom League. Our committee had no prepared literature with which to combat these articles, but depended upon personal interviews with the members of the General Assembly.

I wish to state that Dr. R. L. Smith of Russellville, and who in my opinion is the most scientific and intellectual eclectic in the State of Arkansas, did not authorize his name to be signed to the articles prepared by this Medical Freedom League, and he will deny their authority to use his name in an article which will appear in the Gazette this week. Dr. Smith appeared before the house committee and delivered a strong address in support of the bill. The Arkansas Medical Society feels grateful to Dr. Smith for his exalted services in the interest of the people.

Another measure which was committed to our committee by a resolution introduced at the last session of the House of Delegates was to work for the passage of a bill looking to the acquirement by the State of Arkansas of the Medical Department of the University of Arkansas. Your committee felt that the public health bill overshadowed in its importance in a general way this bill, and agreed not to take up this bill until the public health bill was disposed of. Your committee will, as early as policy will permit, use its energies toward the passage of the medical college bill. The prospects are good for its passage, as the faculties of the two schools are united on the measure.

There have been two bills introduced in the legislature which affect medical practice, but as they in no way affected our medical practice act, your committee did not officially take cognizance of them.

We wish to thank the members of this society who responded so promptly to messages from the secretary's office, and but for their united action I doubt that this bill will pass into a law.

Mr. President, I trust the members will pardon this long report, but I take it that it is of such great interest that I shall be excused for my prolixity (Applause).

Dr. R. H. T. Mann, of Texarkana, made a motion which was unanimously carried, that the thanks of the society be tendered the members of the committee.

REPORT OF COMMITTEE ON SCIENTIFIC WORK.

Dr. B. L. Harrison, chairman of the Committee on Scientific Work, reported as follows:

To the Members of the House of Delegates of the Arkansas Medical Society:

Your Committee on Scientific Work begs to report that in accordance with the duties assigned by the constitution, the program as submitted was arranged with the valuable assistance of the section officers and the Arrangements Committee of the Sebastian County Medical Society. We believe it will compare favorably with the programs of other sessions, and assure you we have done everything in our power to make it worthy of your consideration and adoption.

Respectfully submitted,
B. L. HARRISON, Chairman,
H. H. NIEHUSS,
MORGAN SMITH.

Dr. C. P. Meriwether of Little Rock moved the adoption of the report. Carried.

REPORT OF THE COMMITTEE ON CONSOLIDATION OF MEDICAL COLLEGES.

Dr. Frank B. Young, of Springdale, chairman, introduced the following report, which was read amidst applause:

"The object of this committee is well known, as is the offer of the Medical Department, University of Arkansas. The offer of the Medical Department, University of Arkansas, is embodied in Senate Bill No. 416, which has already passed the Senate and is now pending in the House, where it will doubtless pass if petty politics do not kill it; there is no objection from anyone to the bill itself. However, at this writing it seems that the bill may be lost in the bustle of finishing up the work of the session. In the event this bill does pass, an agreement has been reached whereby the College of Physicians and Surgeons will turn over certain of their property and all of their good will to the Board of Trustees of the University of Arkansas, to be controlled by the board. The faculty of the College of Physicians and Surgeons will resign, as will that of the Medical Department, University of Arkansas. This has been agreed upon by representatives of both schools and by a number of members of the Board of Trustees of the University of Arkansas, and is heartily entered into by all concerned.

Should the bill fail to pass we still have a tentative agreement that the two schools will unite and a larger and better school be opened in Little Rock next fall, and two years from now the legislature will again be asked to act in the matter. We feel that the two schools and the members of the faculties are now working in better spirit and harmony than for years past, and that in this merger we have the nucleus of one of the great medical colleges of the South. There is room in the faculty for every physician of ability in Little Rock, and we soon expect to see the end of that discord and strife which was rapidly permeating the Arkansas Medical Society.

The action of this committee brought forth some unkind words and experienced some bitter feelings, but we think that this is all ended now and that all interested parties are satisfied with the results. There is just one thing we have failed in if the bill passes, and that is in securing an appropriation. This was found to be absolutely impossible in the present condition of the State's finances and was not asked, but we hope to do better soon.

We recommend that a permanent committee, to be known as "The Committee on Medical Education," be appointed at this meeting. This committee should consist of one member from each councilor district, the outgoing and incoming presidents of this society, the secretary of this society and the dean of the Medical Department of the University of Arkansas, as formed from the merger mentioned above. Its duties shall be to foster and sustain an interest in medical education in Arkansas in every way possible; to attempt to gain the united interest of the profession of the whole State in the Medical Department of the University of Arkansas; to inspect the teaching facilities and laboratories of the Medical Department, University of Arkansas, at least annually, and report to this society, or to the proper authorities, such changes as they would deem beneficial; to attempt to interest wealthy members of the profession and other philanthropic citizens in furnishing an endowment for the Medical Department of the University of Arkansas; to work for the establishment of a State General Hospital to be run under proper control

in connection with the Medical Department, University of Arkansas; to advise with the Board of Trustees, University of Arkansas, as to changes in laboratory work, teaching facilities, etc., when requested to do so; and in all other ways to forward the cause of medical education in every possible manner, with the further understanding that these duties are wholly advisory and not in any way executive.

We recommend that this committee be named by the councilors instead of being named by the delegates or president, and make it self-perpetuating; that is, when one member drops out for any cause the remaining members shall have the power to name his successor, with the understanding that any or all the members may be recalled by the House of Delegates or the Council at any time. In this manner the committee will always be familiar with the work in hand as even the members elected will serve two years, and still the whole committee will be amenable to the House of Delegates or the council.

When this merger is formed we ask the support of the united profession of the State for the Medical Department, University of Arkansas, for we believe it will be a grand success.

With this report and recommendation this committee asks to be discharged."

F. B. YOUNG, Chairman,
W. S. STEWART.

On motion of Dr. Wm. V. Laws of Hot Springs the report was referred to the Reference Committee.

REPORT OF COUNCILORS.

Dr. J. C. Wallis, Chairman—I have not yet received reports from three of the councilors, and I would request that my report be deferred until a later time.

The request was granted.

The Underwood Typewriter Company tendered the use of free stenographers and typewriters during the session. A vote of thanks was tendered the company.

APPOINTMENT OF NOMINATING COMMITTEE.

The delegates from the several Councilor Districts met and made the following nominations for the Nominating Committee:

First Councilor District—Dr. Thad Cothren, of Green County.

Second Councilor District—Dr. L. T. Evans, of Independence County.

Third Councilor District—Dr. T. J. Stout, of St. Francis County.

Fourth Councilor District—Dr. H. D. Smith, of Desha County.

Fifth Councilor District—Dr. R. A. Hilton, of Union County.

Sixth Councilor District—Dr. M. L. Norwood, of Pike County.

Seventh Councilor District—Dr. L. H. Barry, of Garland County.

Eighth Councilor District—Dr. W. A. Snodgrass, of Pulaski County.

Ninth Councilor District—Dr. F. B. Kirby, of Boone County.

Tenth Councilor District—Dr. C. A. Rice, of Benton County.

THE SELECTION OF THE MEMBERS TO BE RECOMMENDED TO THE GOVERNOR FOR APPOINTMENT ON THE STATE BOARD OF MEDICAL EXAMINERS.

The President called attention to the fact that the terms of office of the members from the First, Fourth and Fifth Congressional Districts had expired, and that it would be necessary for the House of Delegates to select three names from each district to be certified to the governor, and from which list the appointments will be made. The members from the First, Fourth and Fifth Congressional Districts assembled, and after ballot reported the following names:

First District—Dr. M. Fink, Dr. H. M. Dickson, Dr. W. H. Deaderick.

Fourth District—Dr. W. P. Parks, Dr. F. T. Isbell, Dr. E. G. Epler.

Fifth District—Dr. George S. Grown, Dr. A. H. McKenzie, Dr. W. R. Hunt.

MEDICAL ORGANIZATION.

Dr. R. H. T. Mann—In view of the fact that we are having such a hard time getting desired legislation, it seems to me that the doctors in the State should be encouraged to take more interest in the work. There are 3,600 practicing physicians of the regular school in Arkansas, 900 of whom are members of this society. I move that the president appoint a committee to investigate the advisability of employing a State organizer.

After a short discussion the president appointed a committee of five to investigate the feasibility of such a movement. The following members were appointed on the committee: Dr. R. H. T. Mann, Dr. M. L. Norwood, Dr. A. G. Warren, Dr. L. J. Kosminsky and Dr. Thad Cothren.

On motion the House of Delegates adjourned.

HOUSE OF DELEGATES.

Last Day—Friday, May 5.

The House of Delegates was called to order by the president in the county court room at 11:30 a. m.

REPORT OF THE REFERENCE COMMITTEE ON THE REPORT OF THE COMMITTEE ON THE CONSOLIDATION OF MEDICAL SCHOOLS.

"We, your committee appointed to investigate the report of the Committee on the Consolidation of Medical Schools, recommend that instead of the committee being appointed by the House of Delegates or the president, that the Councilors make the appointment."

T. J. STOUT, Chairman.

Dr. Hilton—I move that the report be received and the committee discharged.

Seconded. Carried.

THE REPORT OF THE COMMITTEE ON PRESIDENT'S ADDRESS.

"We, your committee, endorse the many good suggestions offered by the President in his address, and more especially along the line of consolidating the two schools, which we, as a committee, believe

will do more to produce harmony in the Arkansas Medical Society than anything else that could be brought to bear.

We also concur in his ideas regarding the establishment of an inebriate asylum.

We heartily endorse all recommendations made by the President in his address and respectfully submit them for your due consideration."

T. J. STOUT, Chairman.

Dr. Henry—I move its adoption.
Seconded. Carried.

REPORT OF COMMITTEE ON ORGANIZATION.

Dr. R. H. T. Mann, chairman of the Committee on Organization, reported as follows:

"We, your committee, recommend that the President appoint a committee of five, of which the president and secretary shall be members, and who shall work in conjunction with the Council to investigate the feasibility of employing a State organizer; and said committee shall have authority to act in the premises in carrying out the purposes of this motion."

The motion was adopted.

REPORT OF COMMITTEE TO VISIT THE UNIVERSITY OF ARKANSAS, MEDICAL DEPARTMENT, AND COLLEGE OF PHYSICIANS AND SURGEONS.

"We beg to ask that this House of Delegates consider that the report of the Committee on Consolidation of Schools be accepted as a report of the committee to visit medical colleges, as we think most of the ground has been covered in that report."

F. B. YOUNG, Chairman.

The report was adopted.

REPORT OF CHAIRMAN OF THE COUNCIL.

Dr. J. S. Wallis, chairman, submitted the following report:

To the Members of the House of Delegates of the Arkansas Medical Society:

"In accordance with the requirements of the constitution, I beg to submit this, the annual report of the chairman. This report is incomplete for the reason that several councilors have sent in detached reports of their work. I take it that the position of councilor is the most important of any office provided by our constitution, and too much time cannot be given to the duties of the position. The scientific efficiency and the material prosperity of the society depend largely upon the work done by individual members of the council.

I wonder how many of our councilors have visited, at least once a year, their component societies and inquired into conditions of the profession and suggested means and opportunities for improving and increasing the zeal of the members of said societies? I wonder how many efforts have been made to mollify petty jealousies that are so detrimental to the efficient work of our members? I wonder how many efforts have been made by the several councilors to organize the thirteen unorganized counties in the State? I wonder how much personal influence and suggestions the several members of the council have given to the editor in his efforts to make the Journal a creditable and high-class periodical? I wonder how much thought has been given in solving the causes that are so vital to the interests of not only this society, but the

component societies of the American Medical Association? In this wondering manner I have outlined some of the salient duties of the Council, and until our members awaken to the realization of their duties and use every endeavor to bring about these ideal conditions, dissension will remain in our ranks, scientific interests will lag and our exchequer will be insufficient for contingencies and emergencies that may arise under less normal conditions.

As a retiring member of the Council I feel that it is my duty to make these statements to you and to adjure the new Council to a realization of the shortcomings of the retiring Council and to profit by its experience. So much for this long preamble. I trust that it will not fall on fallow ground.

The membership of the component societies has held up better than was at first expected, there being only one county reported delinquent, and I have assurances that that county will be reinstated promptly upon notice. A strong effort should be made to organize the unorganized counties, and those councilors in whose districts these counties lie, who fail in this duty, I believe will bring down condemnation on their heads by the next House of Delegates.

We have reason to believe that scientific interest among the component societies is not up to the standard, and some uniform plan of providing programs should be adopted.

Montgomery County, our last offspring, has increased its membership, is thoroughly imbued with the spirit of organization, and has a delegate in attendance in this session.

We wish to urge again the necessity of this society naming a fiscal date, and that the House of Delegates should pass a resolution, or better, an amendment to the constitution, naming a date in December as a uniform day for the election of officers for the component societies. I would suggest that the fiscal year end on December 31 and that the election of officers be made the first Tuesday in December; and further, that annual reports shall be in the hands of the secretary by March 1.

Only two districts have made reports and these reports did not cover all the information which is necessary for the information of the House of Delegates.

The Council unanimously condemns political activity while the scientific bodies are in session. This tends to impair the scientific work.

The Council endorses the State Board of Medical Examiners and urges the House of Delegates to support them in their efforts to raise the standards of medical requirements, in order that the people may be protected from charlatans, quacks and impostors. We would recommend that the governor appoint the strongest men in the society to positions on the State board.

We would suggest that this house appoint a committee to continue the efforts to consolidate the medical schools and that said committee be specifically requested to meet in Little Rock early in June, for this purpose.

We have recommended the following bills: Salary for the secretary, \$400.00; salary for the editor, \$400.00; refund to Dr. Wood for bond, \$5.00.

We ask you to act upon the recommendations suggested, as, in our opinion, they are of great importance."

Respectfully submitted,

J. C. WALLIS, Chairman.

On motion report was adopted.

REPORT OF THE NOMINATING COMMITTEE.

Dr. W. A. Snodgrass, chairman, reported as follows:

To the Members of the House of Delegates:

We, your committee, beg to submit the following as our report:

State Officers.

For President—Dr. W. V. Laws, Hot Springs;
Dr. Morgan Smith, Little Rock; Dr. W. S. Stewart,
Pine Bluff.

For First Vice President—Dr. J. B. Roe.

For Second Vice President—Dr. J. C. Amis.

For Third Vice President—Dr. J. W. Webster.

For Secretary—Dr. C. P. Meriwether, Little
Rock.

For Treasurer—Dr. John S. Wood, Hot Springs.

Councillors.

For Councilor First District—Dr. M. C. Hughey.
For Councilor Third District—Dr. T. B. Bradford,
Cotton Plant.

For Councilor Fifth District—Dr. R. A. Hilton,
El Dorado.

For Councilor Seventh District—Dr. R. Y. Phil-
lips, Malvern.

For Councilor Ninth District—Dr. F. B. Kirby,
Harrison.

Section Officers.

For Chairman Section on Practice—Dr. H. P.
Collings, Hot Springs.

For Secretary Section on Practice—Dr. W. H.
Toland, Mineral Springs.

For Chairman Section on Surgery—Dr. C. F.
Perkins, Springdale.

For Secretary Section on Surgery—Dr. S. E.
Thompson, El Dorado.

For Chairman Section on Obstetrics and Gynecol-
ogy—Dr. W. A. Snodgrass, Little Rock.

For Secretary Section on Obstetrics and Gynecol-
ogy—Dr. R. L. Saxon, Little Rock.

For Chairman Section on Pathology—Dr. W. F.
Mount, Hot Springs.

For Secretary Section on Pathology—Dr. Nina V.
Hardin, Fayetteville.

For Chairman Section on State Medicine and
Public Hygiene—Dr. W. H. Deaderick, Marianna.

For Secretary Section on State Medicine and
Public Hygiene—Dr. L. T. Evans, Bethesda.

For Chairman Section on Dermatology and Syph-
ilology—Dr. Wm. R. Bathurst, Little Rock.

For Secretary Section on Dermatology and Syph-
ilology—Dr. J. H. Weaver, Hope.

For Chairman Section on Diseases of Children—
Dr. William Crutcher, Pine Bluff.

For Secretary Section on Diseases of Children—
Dr. E. E. Barlow, Dermott.

Delegate to American Medical Association—Dr.
G. A. Warren, Black Rock.

Alternate to American Medical Association—Dr.
W. N. Yates, Fayetteville.

Place of meeting, Hot Springs.

Dr. Stewart—In view of the fact of the excellent
service our retiring secretary has given, Dr. Laws
and I have discussed the question and would like
to withdraw from this race, and desire to instruct
the chairman of the Nominating Committee to cast
the entire vote of the House of Delegates for Dr.
Morgan Smith for president.

Dr. Laws—I second the motion.

Carried.

Dr. Snodgrass—It affords me great pleasure to
cast the entire vote of this house for Dr. Morgan
Smith as president for the ensuing year.

Dr. Thibault—I move that for the rest of the
report down to the place of meeting the secretary

be authorized to cast the entire vote of the House
of Delegates.

Seconded. Carried.

The secretary so cast the vote as directed.

President—The next order of business is the
selection of the place of meeting.

Dr. Morgan Smith placed in nomination Little
Rock, and said, in part, as follows: "I wish to
state that I have no objection whatever to go
to Hot Springs. Personally, I would rather go
there, but it has been argued that there is some
advantage in holding a session of this society in
Little Rock in the years in which the legislature
meets. Now, it is not certain that the Arkansas
legislature will hold over in May in each year.
It may be possible that on account of other con-
ventions being held in Little Rock the first two
weeks in May, Little Rock could not entertain this
convention even as early as the second week, and
if it be deferred until the third week, surely the
legislature would not be in session, which, to my
mind, would not be good argument for carrying
the meeting to Hot Springs. There is every reason
why the Arkansas Medical Society should not meet
in Little Rock during the meetings of the legisla-
ture. It is hard for us at present to keep our at-
tendance upon the scientific sessions up to the high-
est point, and if the legislature is in session and
we have important measures on hand, then I am
afraid our members would be more interested in
the bills we may have for consideration in the leg-
islature than in scientific work; it would impair the
efficiency of our work. It would be easy for us, if
we met at Hot Springs two years from now, to send
a strong delegation to Little Rock, it only taking
one or two hours to go there. We are very anxious
to entertain you, especially since I have been hon-
ored by this society, as I understand, and I hope
this year you will name Little Rock as the next
meeting place."

Dr. Thibault also spoke in favor of meeting in
Little Rock, speaking, in part, as follows: "Meet-
ing at the same time in Little Rock with the leg-
islature will have no effect, because the things we
will have before the legislature then will be things
that are brought up at the next meeting and already
put in the hands of the Legislative Committee be-
fore we ever meet."

Dr. Hynes spoke in favor of meeting in Little
Rock, speaking, in part, as follows: "As I under-
stand the workings of the Arkansas Medical So-
ciety, it has been the custom to go back to Little
Rock, to the 'City of Roses,' the gilded dome of
the capitol and all the beauties of nature that are
found there, once in two years, and I am in favor
of meeting in Little Rock."

Dr. W. A. Snodgrass, chairman of the Nominating
Committee, spoke in favor of meeting in Hot
Springs and urged the House of Delegates to accept
the recommendation of the Nominating Committee.

President Dorr also spoke in favor of meeting in
Hot Springs, as did Dr. William Laws, delegate
from Garland County.

Motion to meet in Little Rock was put and failed
to carry, and Hot Springs was the choice of the
House of Delegates as the meeting place for next
year.

**REPORT OF THE COMMITTEE ON TUBERCU-
LOSIS.**

Dr. F. B. Young, chairman, submitted the follow-
ing report:

To the Members of the House of Delegates of the
Arkansas Medical Society:

"Your Committee on Tuberculosis has labored un-
der difficulties on account of not having had a

full meeting at any time during the year until yesterday. We have to report, however, that we have literature on hand as follows: 20,000 folders on "How to Avoid Consumption," which contains a cartoon used by the New York Board of Health. We also have 10,000 of the cartoons alone on thick white paper, 22 by 18 inches, to be posted in public places. We also have a model anti-spitting ordinance which is in accordance with State laws. We suggest that this literature be sent to every registered physician in the State, and to the mayors of every town in the State.

The cost of literature is as follows: 20,000 folders, at \$3.50 per 1,000, \$70.00; 10,000 cartoons, at \$8.00 per 1,000, \$80.00; freight from Providence, R. I., \$14.37; drayage, 50c. Total, \$164.87.

We think this literature, if well distributed, will result in great good in educating the people on this subject, and recommend that a committee be appointed to continue this work.

We regret exceedingly that we were unable to complete this work before this meeting of the society."

F. B. YOUNG, Chairman,
HENRY THIBAUT,
A. J. VANCE.

Dr. Willis—I move that the committee be continued and the report adopted.

Seconded.

Dr. Sweatland—I would like to make a suggestion. We are soon going to elect county superintendents of schools in every county, and I would like to see that the committee puts that literature out so that it would go to each county superintendent of schools, and I think that is the best way to distribute it.

President—I am sure they will act on the suggestion without any vote.

Carried.

ADDITIONAL REPORT OF THE COUNCIL.

Dues Raised.

An additional report of the chairman of the Council was submitted, as follows:

"We, the Council, beg to recommend the following amendment to the by-laws:

Resolved, That the membership dues of the Arkansas Medical Society be raised to \$2.50 per capita, for the purpose of covering the additional expense of issuing the Journal under the new postal requirements."

Dr. Thibault—I move the adoption of the resolution as an amendment to the constitution.

Dr. Meriwether—I would like to state for the benefit of some of the members that the Postoffice Department has notified us that we would have to discontinue sending our Journal as second-class matter. Under the ruling they now have, any society or organization can send through the post-office its own literature where it has a *bona fide* membership requiring them to pay annual dues and splitting it up in any manner whatever. In other words, if we have to split this in any way we will have to have a *bona fide* subscription list of not less than 1,000 subscribers, and it will be left entirely optional with the members of the society as to whether or not they take the Journal. We have had considerable correspondence with the Postoffice Department, and succeeded in getting them to leave it go until after our meeting at this place. It costs us, under the present rate, \$2.75 a month to send our Journal out. We would probably have considerable trouble getting a *bona fide*

list of 1,000 subscribers. We have only about 850 or 900 members, so the only thing I see to do would be to raise our dues and pay this excess postage, which would amount to about \$20.00 per month. If we mail it out under the regular postage we will have to pay \$240.00 a year, whereas, now it is only costing us about \$27.00 to \$30.00. I believe we will only have to do this for a few months, because there is pending now in Congress a bill to cover this particular point.

Dr. Stewart—Do you know how the American Medical Association gets its Journal in as second-class matter?

Dr. Meriwether—They have to do something at their next meeting. They have a *bona fide* subscription list besides. In cases of orders, societies or associations where subscriptions are paid in connection with dues or assessments, and the information hereinbefore described cannot be otherwise obtained, the publisher will be required to so separate such dues or assessments and subscriptions as to permit the ascertainment of such fact, but in all such cases reasonable time will be allowed in which to make the necessary change, and where such separation cannot be made without authority of the regular assemblage or convention of such societies, orders or associations, such changes will not be insisted upon until such assemblage or convention shall have convened in their regular order, after which the necessary separation will be required. Now, I have had considerable correspondence with the secretary of the Journal of the American Medical Association. They have had a man in Washington for the past six months looking after this matter, and it is just in the last few weeks that they issued this circular giving us the right to go ahead under the old law until our association met, and we have got to take some action at this time, or our Journal will be cut out of the mails unless we pay this postage.

Dr. Snodgrass—I move that we increase the dues to cover this matter in the mailing of the Journal.

Seconded.

President—It requires a two-thirds vote, and I hope you will all vote for it.

The motion was carried.

Dr. Hynes—A suggestion I would like to make is in regard to the circulation of 1,000: If you send an organizer into the field and equip him with copies of the Journal, with power to take subscriptions for the Journal at \$2.50, you can get subscriptions from those who do not want to become members, or perhaps are not eligible to membership, such as undergraduates. They receive the Journal for \$2.50, and you can give them something in addition as a premium, as has been suggested by the secretary, Dr. Morgan Smith, a History of Arkansas Medicine, as he has in his mind. When that history is published it might be done in connection with this work to give as a premium to every subscriber in the State, if practicable. The premium to be given for subscription in addition to the Journal, and then you would really get 200 or 300 subscribers and get a subscription list of 1,000, and get your rates of postage under the present law.

Dr. Snodgrass—I would like to make a motion that the price of the Journal be put at \$1.00 to subscribers who are not affiliated members of this society, undergraduates, etc.

Seconded by Dr. Morehead.

Dr. Meriwether—I believe it would be a good thing to do this, because there are a good many doctors in Arkansas who do not belong to the society, and I believe if you put the subscription price down to \$1.00 a great many of them will take it, and secretaries of the county societies can

help get the subscribers for the Journal; but they don't like to pay \$2.00 for it.

Dr. Hynes—If you receive the Journal of the American Medical Association because you are a member of the association, you also receive it because you put \$5.00 into it. It would seem as though you were giving the Journal cheaper to the non-members than to the members. So, I have in mind Dr. Smith's History of Arkansas Medicine, and giving it as a premium.

Dr. Amis—I feel that the question of the Journal of the Arkansas Medical Society is one of compliment to the members of the society. I feel that every member of this society could better afford to pay \$2.00 for a membership without the Journal than they could afford to pay \$5.00 for a membership in the American Medical Association when they never attend meetings, as most of us do. This undergraduate business is a point that appeals to every one of us. We are sorry for the undergraduates of medicine. We feel like they have made a mistake. They probably did the best they could. If you can induce them to become readers of the Journal by letting them have it at \$1.00, it will do them good; it will put them in touch with us, and it will help them as much as we can help them. I am inclined to feel very charitable to the undergraduate who is doing the best he can, but those of the "elect," those that have the right to be members of the Arkansas Medical Society, I feel that we are amply paid for all we put into it—the privilege of being members, to say nothing of the Journal. I consider the Journal—and I read it carefully each month—as a compliment to me. I get my money's worth, and I get \$2.50 worth more than the undergraduate would get if he got the Journal for nothing.

Dr. Meriwether—For the information of Dr. Hynes, at the Los Angeles meeting of the American Medical Association it will be suggested that they place the dues of the association at \$1.00 and the Journal at \$4.00. I had a letter from Dr. Green along these lines, and it has been suggested to them and they are trying to figure it out before they get there.

Secretary—I am in favor of issuing the Journal at any price the society agrees upon, but it costs us \$1.36 to issue one complete number.

Dr. Thibault—The Journal does not actually cost that after we take out the profits of the advertisements. We get back from it other income besides the subscription price. No magazine or Journal anywhere at the present day subscription price will pay the cost of publishing it.

Dr. Hynes—How much more will it cost to print 1,000 copies than 800? Very little more. Your increase for 1,000 copies would be small.

Dr. Meriwether—It costs us \$1.75 for each additional hundred we get out above 1,000 copies.

Dr. Snodgrass—I move the previous question.
Carried.

RESOLUTION ON HOSPITAL FOR INEBRIETY.

Dr. R. A. Hilton of El Dorado introduced the following resolution, which was unanimously adopted:

"Whereas, We believe that the care, management and treatment of confirmed inebriety and drug addictions come within the natural scope of State Medicine; and

Whereas, Several states have already proven what can be done to retrieve these unfortunates from a life of misery and woe and return them to the state as good citizens; therefore, be it

Resolved, That the Committee on Public Health and Medical Legislation be instructed to draft a bill covering the requirements of this resolution and

submit to this House for its consideration at the next annual session.

The resolution was adopted without debate.

The House of Delegates adjourned *sine die*.

General Meeting.

WEDNESDAY, MAY 5, 1911.

MORNING SESSION.

The first general meeting was held in the Sebastian County Courthouse, Wednesday morning, May 5, at 10 o'clock, and was called to order by President R. C. Dorr. A prayer was offered by Rev. M. McKay, of Fort Smith.

ADDRESS OF WELCOME ON BEHALF OF THE FORT SMITH COMMERCIAL LEAGUE.

President Dorr introduced Judge James F. Read, of Fort Smith, who delivered the following address on behalf of the Fort Smith Commercial League:

My friends, I come accredited to you by the Commercial League of the city of Fort Smith, a league which has the material welfare of our city in hand; but I take upon myself the privilege and honor of extending to you a welcome, not only upon behalf of the league, but upon behalf of the whole community and city of Fort Smith, politically, professionally and socially—we all bid you welcome.

My friends, it is always a pleasure to extend the hand of welcome to a guest, even though it be the stranger at your gates—it is one instance in which it is always more blessed to give than to receive; but when we extend the hand of greeting to our friends and brethren, the pleasure is a hundred times more delightful. You are both our friends and our brethren, because you come from the State that we belong to. You are in no sense strangers in our midst, whether you come from the mountains or the valleys; you still come from Arkansas, and we have for our mother one commonwealth. I like that name of commonwealth as applied to a State. We should all regard our State as our commonwealth, the common weal of one, the weal of all; the woe of one, the woe of all. We have, ladies and gentlemen, a State of which we may justly be proud. She has dealt bountifully with us and the gifts she has bestowed are both varied and generous, whether it be the big red apple of the northwest, the fleecy cotton of the south, the coal of the central portion of the State, or rice from other portions—sometimes she gives diamonds, as I am reminded by a friend on my left. All these and more are the generous gifts bestowed upon us and bestowed upon us all alike.

In the past many things have been said about this fair State of Arkansas, and some reflections have been cast upon her fair name. People have been known to laugh when it was announced that a person came from Arkansas, but that was a long time ago. She has gradually emerged from that position, and, while heretofore she has not been a favored sister in the sisterhood of States, yet we believe it will finally be decreed that she is the Cinderella of the States and will wear the golden slipper (Applause).

I know all who live here will voice the sentiments of Bill Quissenberry, who sang "God Loves Not Him Who Loves Not Arkansas."

Arkansas bestows her gifts and her kindnesses with impartial hand upon her children, whether natural born or children by adoption. Many of you, I suppose, like myself, are sons by adoption. I am from the State of "Ole Kaintuck." When I think about it, sometimes I feel like the old fellow who had come to Arkansas from South Carolina. He happened to be in a crowd of gentlemen who were discussing where they came from. One said he was from this, another from that State, and another from another. This old fellow said nothing at all. Finally someone in the crowd asked him, "Where did you come from?" He replied, "I came from South Carolina. It is a damn good State to come from, and if I was back thar now, I'd come agin!" (Laughter and applause). Well, that is the way I feel.

Now, gentlemen, we welcome you to this, our town, because you come to us in the guise you do. You come to us as professional men seeking your own betterment and to discuss questions of interest for the welfare of the State. You come to us representing the profession that has done more and is capable of doing more for Arkansas from a physical standpoint than any other profession or body of men. We recognize in you a profession that has waged as gallant and incessant a battle against disease and death as ever our ancestors waged for civil liberty against the old-time kings.

Your profession has given the victims of ghastly consumption assurance and hope. It has taught us how to fight that hydra-headed monster, malaria, and drive him even from his lair among the swamps and river bottoms of Arkansas; it has snatched from smallpox its terrors and weakened the vise-like clutch of that dread malady, diphtheria; it has made a noble and brave fight against the fevers of the South, and will eventually overcome them. The work that you have done for the good of humanity has placed a debt upon us that we can never repay and which we shall remember to our last days.

We bid you welcome because you are Arkansans, and especially because you are doctors. We welcome you to the city standing upon the western borders of the State. It is a city of the most enterprising and progressive men and beautiful women and the greatest resources of any city in this section. Now, as that may not suit some of you, you can make the word section apply to any territory you want (Applause). Now, I don't want you to think these facts are not supported by the evidence. The secretary of the Commercial League cautioned me not to exaggerate; the fact is, he wrote this part of my speech for me. I want to say before I begin my statement, that everything I say is true. Not because it is printed in a book; but I want to preface what I have to say in the matter with an extract from Bobbie Burns when he wrote that celebrated poem of his entitled, "Death and Doctor Hornbook." Probably all of you have read that, too. He says, you know:

"Some books are lies frae end to end,
And some great lies were never penn'd;
Even ministers they hae been kend
In holy rapture,
A rousing whid at times to vend,
And nail't wi' Scripture."

But what I am going to tell is true as the devil in hell or Dublin City.

Now, in the first place, we have here a city with a population of about 30,000. The United States

Census Bureau gave us a little less than 24,000, but that was not our fault; we did the best we could, and we know we are right. We have a city out of debt with \$100,000 in the treasury (Applause). That is an agreeable condition of affairs, but I want to add that we are going to spend it for beautifying and improving our city. I hope that you will return to us after we have spent that money for improvements and see what we have accomplished. Our city has let a contract for 72 miles of additional pavement and the work is now under way. We have the best roads in the country, in fact the "good roads" movement in Arkansas started in Sebastian County. We have the finest high school in the State, and I suspect the finest in the Southwest. We have fine ward schools and fine churches. In other words, everything we have is fine, as I hope you will discover before you leave. I know we have the finest lot of doctors in the State of Arkansas. Our object in calling your attention to these advantages is that while you are at Fort Smith you may enjoy them to the fullest extent. Whatever you see here is yours for as long as you want, and if you don't see what you want, ask for it and it will be forthcoming. I want to say to you that everybody here bids you welcome, from the mayor to the sanitary policeman, from the richest man in Fort Smith to the summer coon that will put a shine on your shoes; everybody voices a word of welcome to the doctors of Arkansas to Fort Smith (Prolonged applause).

ADDRESS OF WELCOME ON BEHALF OF THE SEBASTIAN COUNTY MEDICAL SOCIETY.

President Dorr next introduced Dr. H. Moulton, of Fort Smith, who spoke on behalf of the Sebastian County Medical Society, as follows:

Ladies and Gentlemen, Members of the Arkansas State Medical Society:

"It is my privilege and pleasure to represent the Sebastian County Medical Society in welcoming you here to Fort Smith, the greatest city in Arkansas (Applause). You will pardon me for speaking of our town as the greatest city in Arkansas, for I promise you I am not going to enter into an extended argument on that subject. It is unnecessary after following the excellent speech of Judge Read. He has told you all about it. Besides, I want to repeat to you a little story I heard Dr. Hynes tell the other evening about the late Gen. Benjamin F. Butler. Two gentlemen in Boston were earnestly disputing with each other, when along came Gen. Butler. The disputants appealed to him, saying, "General, we have been discussing who was the greatest lawyer in Massachusetts." "That's easy," was the rejoinder, "I am." "Well, suppose that were true, how can we prove it?" "You don't have to prove it," he replied "I admit it" (Laughter and applause). So it is with Fort Smith. When you go home and tell your friends that you have been in the greatest city in Arkansas, if they want you to prove it, tell them you don't have to prove it; Fort Smith admits it. Besides, you can see for yourselves.

It was not our purpose to invite you to our city to brag about our city, about ourselves and about our progress, or to show ourselves off. We have long wanted you to come here because we know you, because we like you and want to shake hands with you; we want to meet you here and talk together for our mutual good. We have long wanted you to come here, because you are the handsomest

men in Arkansas (Applause). Because you are the best men in Arkansas.

I have been thinking lately about doctors and wondering why it is that they are the best men in their community. Mostly, they are God-fearing and law-abiding men and possess many other attributes in common with good men; but it seems to me there are two characteristics which, united in a doctor, distinguish him and set him on the highest level. These are his devotion to science and his love for humanity. The recent advances of science have been so great that the curriculum of the medical schools has been greatly lengthened. Whereas, formerly two years was deemed sufficient for a medical man's training, now it requires four to eight years to give that amount of training which is necessary before he begins the practice of his profession. This training is mostly in science and scientific observation and necessarily makes of him a scientist.

The scientist must necessarily be an honest man. He accepts nothing as a fact that cannot be proven both ways, and, if necessary, tried by fire. He asks nobody to accept a statement of his own until he is able to prove it by fire. All the doctor's labors are expended for the benefit of humanity. As they are based on science, they must needs be good, for science itself is beneficent. Have you ever stopped in your busy lives to think of the wonderful progress the world has made in the last fifty or one hundred years? Have you ever stopped to think what might be the cause of this stupendous forward movement? It is not luck, for the Lord never intended His creatures to progress toward perfection through mere chance. It is not toil, for mere uninspired labor has never secured for man anything more than food and shelter. It is not philosophy, or poetry, or art, for these flourished in the full beauty of their perfection for ages before the world began to move; but when man began to investigate the forces of nature and to master and appropriate them to his use, then progress began. This is science, mathematics, physics, chemistry, biology. These are the agencies which have increased the fertility of the soil and secured for man the comforts of life and placed them within the reach of every one. They have secured for man rapid transit, electric light, telephone and telegraph. They have secured for you means by which you may alleviate pain and cure disease and prevent many of the hitherto frightful diseases. Discoveries that have accomplished all this have been some of greater and some of lesser magnitude. In our own State scientific effort has secured for us the Cargile membrane. It has led us to the discovery of the anesthetic qualities of quinin and urea hydrochlorid through the clinical deductions of Dr. Thibault, and there are other instances of these results which I do not now recall.

Many of the great epoch-making discoveries of science have emanated from unexpected sources; others have come from well-equipped laboratories, the result of methodical search for the thing discovered.

Though the laboratory of Watts was but a kitchen equipped with a stove and a tea kettle, his discovery of the power of steam was of no less benefit to the world than the discoveries of Edison, made in one of the most complete physical laboratories of modern times. Because the laboratory of Jenner was but a farmyard equipped with a cow and a milkmaid, his discovery of vaccination was of no less scientific value and of no less benefit to man than the discoveries of Pasteur, made in his richly endowed laboratory in Paris.

I could mention anti-toxins and Flexner's serum and bring to your attention a long list of meritorious scientific discoveries, but there is not time here.

These discoveries have placed in your hands the power of curing disease and alleviating pain, and you are doing noble deeds when you go about alleviating pain and curing disease. These scientific discoveries have also placed in your hands the power of preventing disease. You do a far nobler act when you go about preventing disease than when you go about curing it; it is not only for the good you do to humanity, but because you do it without hope, or even a thought of material reward. You do it from pure love of humanity.

You recognize the fact that to be effective the principles of hygiene and prophylaxis must be spread broadcast and the widest publicity given to these facts. You do not withhold your aid from any movement in that direction. I might mention a noted instance of your aid to such movements in the society for the prevention and control of tuberculosis. You also recognize the fact that in order to be effective, these measures that you advocate must receive the support of the State. Some men will clean up their back yards if you suggest it; others will not do it until you compel them to do so. So you have gone before legislative bodies and asked for the enactment of measures which would save the lives and preserve the health of thousands of citizens. Sometimes you have been met cordially and have succeeded, then, again, you have encountered obscure and unforeseen opposition. That man or that set of men, who, for the sake of the profits derived from the sale of nostrums or poisoned food and their advertisement, have organized in opposition to you or have subsidized the press against you, cannot long prevail. The people are going to demand, they are now demanding, the protection which science offers them, which they deserve and which is their right (Loud applause). Preventive medicine is to be the crowning glory of science.

It is for these reasons, gentlemen and ladies, that we welcome you to Fort Smith. We have wanted you a long time, and we hope your deliberations here may advance you one step forward in the steady march of the sciences—may lift you one step higher toward the summit of those delectable mountains where is waiting the reward of your true devotion to humanity.

Ladies and gentlemen, you are welcome, thrice welcome. While you are here everything that we have is yours (Prolonged applause).

RESPONSE TO ADDRESS OF WELCOME ON BEHALF OF THE ARKANSAS MEDICAL SOCIETY.

Dr. F. Vinsonhaler, of Little Rock, responded to the address of welcome as follows:

Mr. President, Ladies and Gentlemen:

"I trust that I do not need much of an introduction to the members of the Arkansas Medical Society. It is a pleasure to me to be able to respond in behalf of the members of this Association, and it has been a great pleasure to me to enjoy the privilege of listening to the addresses made by two distinguished members of professions represented here in this city.

Mr. Sim Ford, one of the most cultivated and pleasing of speakers, has said that one of the most fortunate and propitious things in the world that can happen to a man when he makes a speech is

to be preceded by a United States Senator. Now, that does not apply in this case, but I hope that sometime later perhaps it may. I am reminded of a story that someone told me of the Judge, when he was a young man and came here to try a very important lawsuit. He was seated in the court room and a friend who knew him appeared in the hall and kept beckoning to him. Finally the Judge left his work and went to the door. The man called him clear outside and said, "Judge, I would like to borrow five cents." "Do you mean to say that you interrupted me and called me out here to borrow five cents from me?" demanded the Judge. "Judge," says he, "I'll tell you; I didn't know whether you had it or not, and I didn't want to embarrass you" (Laughter and applause).

Now, I can say that if I were to nominate the Judge for United States Senator, I am satisfied it would meet the approval and hearty endorsement of a majority of the members of the State Society. It might embarrass the Judge and it would perhaps prove a more pleasant means of reciprocating if I refer some of the good things we have heard. We have been told much of the beautiful city we are now in; it has been styled the greatest city in Arkansas, in fact, the only city in Arkansas. I am not going to quarrel with any of these statements, but when a Fort Smith man gets up and says all of these good things he usually hesitates, and the audience has a lurking suspicion that he is saying inwardly, "Lord, I believe; help Thou mine unbelief."

I noticed the other day that one of the acts which the State Legislature had passed was one authorizing the construction of a highway between Little Rock and Fort Smith. This will become a most important factor in our advancement. When this great highway is completed it will afford the people of Fort Smith an opportunity to go down and see what a great city really is. They can visit Little Rock, become acquainted with its resources, see and know its citizens, fall in love with them, experience the thrill of contemplating the busy scenes of activity along its thoroughfares, visit the State Capitol and from its dome look down upon the vast expanse of busy streets and happy homes, and behold the splendor of the myriad lights that glow forth after nightfall. There is not a man here who would not be charmed by the beauty and grandeur of the scene before him and willingly admit the superb attractiveness that surrounds what we consider the most beautiful city in Arkansas—our greatest city, the capital of our great State.

We met here thirty-three years ago. I do not say that I was here and I am not going to tell you who was here, because some of the men might deny it, but there are men present who were here at that meeting. The Medical Society was an association of giants in those days. There were Duval, Welch, Keller, Horner, Carrigan and many others. I am not under examination as a witness and I am not going to mention some of the others who were present and are still here. I am glad that you were there, though, and that you are still with us, and trust that you will continue to greet us on other and similar occasions in the future. There may be a few straggling gray hairs in their eyebrows and beards, perhaps, and their crowns not so hirsute as formerly, but none of us will admit we are growing old. As our good friend Dr. Holmes tells us:

"Has there any old fellow got mixed with the boys? If there is, put him out without making a noise. Hang the almanac's cheat and the catalogue's spite;
Old Time is a liar—we are twenty tonight.
Gray temples at twenty? Yes, white, if you please.
Where the snowflakes fall thickest there's nothing can freeze."

I remember—not thirty-three, but fifteen years ago—I was here and began my initial work as Secretary of the Arkansas Medical Society. We were delightfully entertained in the hospitable homes at that time. Among the guests at one of the various entertainments was Dr. Horner, of Helena. I wish he were here today to be reminded of this little incident. Nothing would please him better. During the festivities on that occasion one of the young ladies approached and said, "Is this Dr. Horner?" "Yes, my dear young lady," he replied, bowing gracefully. "Well, Doctor," she continued, "my mother instructed me to please meet you and to tell you that you were my grandmother's first sweetheart." The doctor gave one of those most courtly bows he is known to make, and replied, "My dear young lady, you have been misinformed. That was my grandfather" (Laughter and applause).

Gentlemen, we accept your hospitality. We indeed feel assured that we are not among strangers. We know that no other hand clasps ours with grasp so true and with so cordial greeting. It gives me great pleasure to accept all these tokens, because it is an evidence to me of an unbroken friendship and high regard that has existed with me for nearly twenty years (Applause).

Dr. Thad Cothren, First Vice President, assumed the chair and introduced President Dorr, who delivered his Annual Address.

On motion of Dr. A. G. Warren, of Black Rock, the President's Address was referred to the Reference Committee.

Dr. J. G. Eberle, chairman of the Committee on Arrangements, announced the social program for the meeting.

On motion the general meeting adjourned.

AFTERNOON SESSION.

The general session was called to order by President Dorr at 4:00 p. m.

President Dorr—I have called this meeting of the general session for the purpose of discussing what action this society should take concerning the Public Health Bill now pending in the Lower House. I am informed by the Secretary that the bill came up in the House for final passage yesterday and was nearly defeated. Our friends in the Legislature have requested that we take some decided action as a Society. The Secretary has a resolution which I shall ask him to read.

MEMORIAL TO THE HOUSE OF REPRESENTATIVES.

The Secretary—The Committee on Medical Legislation has prepared the following resolution, which is offered for your consideration and action:

To the Members of the House of Representatives, Little Rock, Ark.—Gentlemen:

Whereas, Public health is a public necessity; and

Whereas, Public health matters should receive the greatest consideration of legislative bodies; and

Whereas, Arkansas is the only State in the Union without adequate public health laws; and

Whereas, Senate Bill No. 451 is reasonable, without prejudice to any religious sect or school of medicine; does not interfere with the practice of any system of medicine; and

Whereas, The bill has the unqualified endorsement of prominent public health officials in other States; and

Whereas, The bill does not abridge the rights of any person, but on the contrary seeks to protect uniformly and without distinction all classes of people; and

Whereas, If said bill be enacted into law and its provisions become operative, it will be the means of saving thousands of deaths from well-known and easily preventable diseases; therefore, be it

Resolved, That the members of the Arkansas Medical Society, now in session, most respectfully request and urge you to pass Senate Bill No. 451, as said bill is in the interest of all the people of the State of Arkansas.

Dr. J. G. Eberle, of Fort Smith, made a motion that the resolution be adopted, and said: "I believe this an opportune time for the Society to take action, for such action cannot be ignored by our lawmakers; and, while our position is clearly defined and our convictions fixed, we should send a strong committee to Little Rock in the interest of this measure. It is a shame and a disgrace that a few quacks and Christian Scientists, in their blind fanaticism, should be allowed to defeat this bill without a strong fight on our part."

Dr. Amis, of Fort Smith, spoke in favor of the resolution and advised that only tried, discreet and capable men be put on the committee.

Dr. Holland, of Hot Springs, was in perfect accord with the spirit of the resolution, and only wished that it would be possible to get the matter personally before each representative. He suggested that instead of sending a committee, a night letter should be sent and every physician present should sign it, the same to be transmitted without delay to the Speaker of the House.

Dr. Eberle agreed with Dr. Holland's suggestion, but thought it would strengthen the

cause by sending a committee with the communication.

It was suggested that the resolution be first adopted and the question of transmitting it be considered later, and on motion the resolution was carried unanimously.

Dr. Bary made a motion that the President appoint a committee to convey the resolution to the House and lobby with the members until the last moment. Dr. Norwood offered an amendment to the motion for the chair to appoint a committee to select the committee. The motion was carried and the President appointed Drs. Eberle, Smith, Norwood, Bary and Vance.

Dr. R. A. Hilton, of El Dorado, moved that every member of the Society present send a telegram to his representative and ask him to support the bill. Where there are several members present from one county, they should jointly send a message representing their Society as a whole. Motion seconded by Dr. Bary.

Dr. M. L. Norwood, of Lockesburg—For the information of the house, and in keeping with Dr. Hilton's motion, I would suggest that the Secretary read the list of names showing those who oppose and those who favor the bill. This will acquaint the members present with how their representatives voted.

The Secretary read the list as requested, indicating those who opposed the bill.

The Secretary—I note that Mr. Whittington, of Garland County, is reported to have voted against the bill. Mr. Whittington has been one of our strong friends, and I cannot understand this change of front. It may be possible that he voted in the negative in order to obtain parliamentary advantage. I should like to take the most charitable view of it.

Dr. Eberle suggested that it would be more satisfactory if the different county delegations should get together and join in one telegram to the representatives who are misrepresenting the people in this matter.

Dr. Rush thought it would be better for certain members to go to Little Rock and present the petition personally.

Dr. Warren, of Black Rock, was surprised to learn that his representative was opposed to the bill. He vaccinated him early in life and thought he had put the right sort of virus in his system. He thought personal let-

ters would be more effective than to send a delegation.

Dr. Holland reminded the members that the time for being quiet had passed. It was a moment of activity, and if the bill was saved it would have to be done at once. He said it made no difference with him how the petition reached the legislature, whether by telegrams or by delegations, but what was needed was to bring this matter before each representative by prompt action.

The Secretary explained that a test vote was taken on a motion to indefinitely postpone the bill, and that there were forty-two in favor of and forty-seven against the motion.

Dr. Bary said he would personally see Representative Whittington and endeavor to bring him in line for the bill.

Dr. Vance, of Harrison, in accordance with instructions from the Secretary, got up a petition, signed by over one hundred persons, and forwarded it to his representative with a strong appeal for him to favor the bill. A ballot showed that Dr. Vance's representative had ignored the petition and voted against the bill.

President Dorr—Dr. Murphy and I had an interview with Representative Jackson, of Boone County, who was very bitter against the bill, but he finally promised us that he would support it, but I see now that he did not keep his promise.

Dr. Frank B. Young, of Springdale, suggested that as there are some physicians who were not on right good terms with their representatives, any attempt to influence them in favor of the bill would profit nothing, and in such cases it would be better for them to say nothing and watch the fight. Dr. Young recited an instance of a well-known politician from one of the largest counties in the State who promised members of the committee to support the bill, but who not only voted against the bill, but made a most bitter speech against it. Dr. Young favored sending telegrams, personal letters and committees—in fact, every activity should be taken advantage of that might gain friends for the measure.

Dr. Howard P. Collings, of Hot Springs, offered a substitute resolution that each dele-

gate present, whose representative is known to have voted against the bill, repair immediately in a body to the telegraph office and send a telegram to each one of the representatives, and also that each delegate be requested to send a letter in the following mail.

Dr. Warren opposed the substitute on the ground that each delegate should handle the matter according to his own judgment.

The substitute motion was put and unanimously carried.

HON. C. R. BRECKINRIDGE INTRODUCED.

Dr. L. H. Bary, of Hot Springs, moved that the courtesies of the floor be extended to Hon. Clifton R. Breckinridge, former minister to Russia. The motion was carried unanimously, and Hon. Mr. Breckinridge was introduced and spoke as follows:

"Mr. President and Gentlemen of the Arkansas Medical Society—I thank you very much for your hearty and cordial invitation to address you, but of course I could not presume to offer to give you anything that would be especially interesting or edifying to you on this occasion. I come before you as an ordinary citizen, engaged in prosaic work. I am much gratified to have been honored by your society. I thank you again for the hearty invitation to address you" (Applause).

SPEAKER MILWEE THANKED.

Dr. E. E. Barlow, of Dermott, thought the Society should take official recognition of the interest which Speaker Milwee has shown in the Public Health Bill, and moved that a telegram be sent him expressing our appreciation. The Secretary prepared and read the following telegram, which was adopted, amid applause:

"The Arkansas Medical Society, now in thirty-fifth annual session, officially and gratefully recognizes the invaluable services rendered by you yesterday in your gallant fight to save Senate Bill No. 451. Please accept our heartfelt thanks."

(Note.—The memorial to the House of Representatives, as adopted, was signed by all the members present, and was delivered to the committee to be transmitted to the speaker.)

A motion to adjourn was carried.

THURSDAY MORNING, MAY 4, 1911.

Dr. Dorr called the general meeting to order at 9:30 a. m., and, as there was no business to be transacted, the meeting was adjourned.

FRIDAY MORNING, MAY 5, 1911.

President Dorr called the meeting to order at 9:00 a. m.

President Dorr—I wish to notify the members of the House of Delegates that there will be a meeting of the House of Delegates immediately after the adjournment of this session.

There being no further business, the general session adjourned to meet at 1:30 p. m.

FRIDAY AFTERNOON, MAY 5, 1911.

The general meeting was called to order by President Dorr at 2:00 p. m.

RESOLUTION TO PROHIBIT ANNUAL BANQUETS.

Dr. H. D. Wood, of Fayetteville, introduced the following resolution and spoke for its adoption:

Whereas, Banquets are not for the professional good of members, are fraught with evils, interfere with the business of the society, especially the session on the following morning, incapacitate members for full and free participation in the reading and discussing of papers, and tax the local profession unnecessarily; therefore, be it

Resolved, That it is the sense of the Arkansas Medical Society that this unnecessary eating and drinking be left off by the Committee of Arrangements in the future meetings of this Society.

H. D. WOOD,
W. A. SNODGRASS,
E. E. BARLOW,
R. Y. PHILLIPS,
CHARLES H. CARGILE,

Dr. J. S. Cargile, of Bentonville, seconded the motion.

Dr. Foltz, of Fort Smith, moved that the resolution be tabled, which was carried by a large majority.

REPORT OF NOMINATING COMMITTEE.

The report of the Nominating Committee was read by Dr. W. A. Snodgrass, the chairman, and adopted.

INTRODUCTION OF NEWLY-ELECTED PRESIDENT.

President Dorr appointed Dr. G. A. Warren and Dr. J. C. Webster a committee to escort Dr. Morgan Smith, the newly-elected President, to the rostrum.

President Dorr said it was a pleasure to introduce Dr. Smith, the newly-elected President, as one who had given a great deal of

time and study to the subject of preventive medicine, and hoped by the end of his term he would be able to establish preventive medicine in Arkansas on a sound basis, and that through his efforts hookworm disease and malaria would disappear from the State, and that we shall learn to know him as the "Preventive Medicine President" of the Arkansas Medical Society (Applause and cheers).

Dr. Smith assured the society of his appreciation of the honor of being chosen the thirty-sixth President of the Arkansas Medical Society. He considered it a great honor to follow in the footsteps of some of the most noted, brilliant and sweetest characters that Arkansas ever produced. He especially referred to Dr. W. B. Welch, of Fayetteville, the first President of the Society, and trusted that his term of office might end with the same degree of honor that had fallen to other worthy presidents.

Dr. Smith pledged his support to labor for every measure calculated to increase the interest of the society and broaden its scope. In concluding, he expressed the hope that the Hot Springs meeting in 1912 would be the largest in the history of the organization, and that all those present would find it convenient to attend.

RESOLUTIONS OF THANKS.

Dr. R. A. Hilton, of El Dorado, offered the following resolutions, which were unanimously adopted amid enthusiasm:

Be it Resolved by the Arkansas Medical Society:

First. That this Society will ever hold in grateful remembrance the courteous and fraternal spirit of the Sebastian County Medical Society in entertaining the members of this Society in Fort Smith. Further, that they have demonstrated that Sebastian County and Fort Smith are both able and capable of exemplifying the true spirit of both doctors and citizens of Arkansas, for which this Society extends its heartiest thanks.

Second. That this Society hereby extend to the Business Men's League of Fort Smith its thanks for the many kindnesses and liberties permitted to the members of this Society, and the most excellent entertainment presented us for our pleasure while here.

Third. That no other organization more thoroughly realizes and feels the power of the press of our country than does the Arkansas Medical Society; therefore, to the Northwestern American of Fort Smith, for the full, complete and all other honest reports of organized medicine given by this paper, we do and shall forever feel kindly, and this Society does here thank this paper for its work in reporting the proceedings of this meeting.

Fourth. That to the Hon. Frank Milwee, Speaker of the House of Representatives of Arkansas, for

his bold, manly and unselfish stand in furthering and protecting legislation of organized medicine pending before this Legislature, that this Society shall forever hold him as one of the greatest of Arkansas' citizens.

Fifth. To Drs. Stokes, Hughes, Buckner, Going, Turner, and other members of the Arkansas Legislature we thank for their untiring and persistent efforts in passing Public Health Bill No. 451.

Sixth. To our retiring President, Dr. R. C. Dorr, for his many efforts in getting better laws enacted for organized medicine, his many efforts in furthering the welfare of all our public interests, his true and impartial rulings while in the chair, we extend a vote of thanks.

Seventh. Last, but best, to the ladies of Fort Smith for the entertaining of our wives, daughters, sisters and other lady friends visiting at this session of the Arkansas Medical Society. May the sunshine of prosperity, love and happiness ever be theirs.

President Dorr—Before adjournment I wish to thank each of you for the courtesies and the uniform support you have given me during my term as President. I shall hold these in grateful recollection.

On motion of Dr. R. A. Hilton, of El Dorado, the general meeting adjourned *sine die*.

Miscellaneous.

TUBERCULOSIS MOVEMENT INCREASED 700 PER CENT—NEW DIRECTORY SHOWS 1,500 AGENCIES ENGAGED IN CONSUMPTION FIGHT.

From statistics published today in the new Tuberculosis Directory of the National Association for the study and Prevention of Tuberculosis, it is ascertained that over 600 cities and towns of the United States, besides about 100 in Canada, are engaged in the war against consumption, and that on April 1 there were nearly 1,500 different agencies at work in the crusade, an increase of nearly 700 per cent in the last seven years.

The new directory lists 421 tuberculosis sanatoria, hospitals and day camps; 511 associations and committees for the prevention of tuberculosis; 342 special dispensaries; 68 open air schools; 98 hospitals for the insane and penal institutions making special provision for their tuberculosis inmates; besides giving an account of the anti-tuberculosis legislation in every State and in about 250 cities. The directory, which is the third of its kind that has ever been published in this country, gives the most complete survey of the anti-tuberculosis movement that can be secured, and shows the remarkable growth of this campaign in

the last seven years. The first directory in 1904 showed only 183 organizations and institutions in the entire United States. The second directory in 1908 reported 649 different agencies, as compared with 1,440 in the new book. Taking these figures as a basis, the anti-tuberculosis movement has increased in force since 1904, nearly 700 per cent, and since 1908, over 105 per cent.

The following table shows the growth of the movement along the principal lines of activity for each year since 1905:

	Sanatoria	Associ- and	Dispen- Air	Open
Established—	ations.	Hospitals.	saries.	Schools.
Before 1905	18	111	18
During 1905	15	18	6
During 1906	18	16	14
During 1907	46	30	45	1
During 1908	109	45	118	2
During 1909	167	67	59	10
During 1910	117	68	62	16
During 1911 (Apr. 1)	21	66	20	39
Total	511	421	342	68

The new directory is sold by the National Association for the Study and Prevention of Tuberculosis, 105 East Twenty-second Street, New York City, at cost price, 50 cents postpaid.

PAIN IN DUODENAL ULCER.

Pilcher concludes that the cause of pain in duodenal ulcer is the hydrochloric acid contained in the gastric juice coming in contact with the ulcerated surface after it has passed into the duodenum. This conclusion is based on the following observations: 1. Ulcer of the duodenum reflexly excites a superacidity of the gastric juice; 2, the maximum amount of secretion of hydrochloric acid in the stomach is due to a direct chemical action (hormones), and is at its height from one to four hours after meals; 3, it passes into the duodenum as hydrochloric acid, there being no food for four hours after meals for it to work upon; and, 4, it does not excite a flow of the duodenal juice directly, and is not neutralized by the small amount present. The relief of pain in duodenal ulcer follows the ingestion of any substance into the stomach, and is due to a reflex stimulation of the duodenal secretion which neutralizes the acid gastric juice. This conclusion is based on the following facts: 1. Food taken into the stomach excites at once a reflex secretion in the duodenum; 2, the duodenal secretion is alkaline in approx-

imately the same degree as the gastric juice is acid; and 3, this secretion is of sufficient quantity and concentration to neutralize the hydrochloric acid of the gastric juice.—New York Medical Journal.

VERDICT OF JURY IN DECKER CASE.

"After deliberating for three hours in the first night session of the present term of court, a jury in the United States District Court last night at 9:00 o'clock brought in a verdict of guilty in the case of the United States against J. William Decker, charged with misuse of the United States mails. Decker was indicted in connection with circulars alleged to have been mailed out of Dallas detailing the advantages of a medical school which he conducted at Ervay Street and Grand Avenue.

Dr. Bell, a witness for the defense, was fined \$25.00 for contempt of court at yesterday afternoon's session, before the jury retired. The witness had been cautioned by the court twice as to making remarks other than in reply to the questions of the attorneys. A remark was finally made to the court himself."

"Mr. Clerk," calmly said the court, "enter a fine of \$25.00 against the witness. Mr. Marshall, take charge of the witness until the fine is paid."

Bell paid the fine within half an hour.—Dallas Times-Herald.

J. William Decker entered the Leavenworth Federal prison yesterday at 10:00 o'clock to begin the serving of a sentence of fifteen months, following conviction on an indictment charging misuse of the United State mails.—Dallas Times-Herald.

The above news item will be of interest to Arkansas physicians when it will be remembered that this is the same Decker who conducted a Dr.-Jekyll-and-Mr.-Hyde medical college at Texarkana several years ago, and who was exposed by a special committee of the Arkansas Medical Society, of which Dr. Morgan Smith wrote the report.

Abstracts.

THE DIAGNOSTIC IMPORTANCE OF THE SKIN LESIONS IN PELLAGRA.

(A case reported by Dr. Wende in the Buffalo Medical Journal, May, 1911.)

Summary.—The clinical features of the case corresponds almost exactly in detail with those of pellagra, particularly those referred to the alimentary tract, to the cerebro-spinal system and to the skin. Some difficulty would naturally arise in making the diagnosis at an early period, as nothing connected with the patient's life or medical history throws any light upon the origin of the disease so strangely affecting her. This woman apparently enjoyed good health until the spring following the birth of her last child, when she became much fatigued from undue exertion and had sensations of weakness, especially in the lower extremities, accompanied with pain in the epigastrium and diarrhea of short duration, followed by constipation. Later there is a history of stomatitis associated with mental depression and gastric disturbances. As the disease progresses these symptoms appear to grow worse until they culminate in an attack of acute mania of short duration, followed by great depression. One rather interesting feature is the early onset of weakness of the extremities, soon associated with neuritis, causing disturbed gait, and finally simulating paralysis. All these are symptoms corresponding to those of the various stages of pellagra. Notwithstanding this, there would never have been any suspicion as to the nature of this disease without the cutaneous manifestations which, though in themselves rather harmless, are, however, of great diagnostic importance. The symmetrical, even, triangular distribution with apices spreading centrally over the wrists, on the dorsum toward the radius, on the palmar surfaces toward the ulna, while the palms are spared, is almost pathognomonic. While the color of the eruption was not characteristic dur-

ing its continuation, yet this, at any one time, was sufficiently so to be distinguishable from any other dermatosis, and this showed a bright red at first, disappearing under pressure to a dull red; later, with the addition of pigment, to a reddish brown, and finally chocolate, uninfluenced by pressure. The chief reason for directing attention to the dermatological symptomatology is because of its importance in the establishment of a diagnosis. Errors have been made by experts all over the country because they have failed to note the relations of the skin changes which should have aroused earlier suspicion.

WM. R. B.

County Societies.

BOONE COUNTY.—Dr. J. O. Nicholson of Protom, Mo., who was born and reared at Harrison, returned June 10 to remain several days, visiting relatives and renewing acquaintances. He was formerly a member of the Boone County Medical Society, and is always a welcome visitor.

Dr. John Sims of Wheaton, Mo., has recently been visiting his father, Dr. J. L. Sims of Harrison.

Dr. J. G. Crump of St. Joe, Tex., who visited the U. C. V. Reunion, came to Harrison for a ten days' visit with relatives. The doctor left here forty-two years ago and has been back but once since that time. He has a large and lucrative practice at his home in Texas.

F. B. KIRBY, *Secretary*.

MISSISSIPPI COUNTY.—The Mississippi County Medical Society held its regular monthly meeting Tuesday, June 13, at 8:30 p. m., at Osceola, in the parlor of the Beall Hotel. The question was discussed as to whether or not the society adjourn until the busy summer season is over; it was decided to continue to hold the meetings monthly.

Several cases were reported and discussed. The following were present: Drs. S. A. Lowry, T. F. Hudson and J. S. McCreight of Luxora, W. E. Turner of Butler, E. E. Craig of Wilson and R. C. Prewitt, H. C. Dunavant, C. M. Harwell and O. Howton of Osceola.

The society adjourned to meet at Blytheville July 11. We hope for a good attendance.

O. HOWTON, *Secretary-Treasurer*.

WASHINGTON COUNTY.—The Washington County Medical Society will meet in regular session at Fayetteville on the 5th day of July. Subjects for discussion, "Enterocolitis," "Treatment of Puerperal Infection" and "Fourth of July Accidents." Drs. J. L. Bean, J. S. Cannon and James Pittman will read papers on these subjects respectively.

NINA V. HARDIN, M. D., *Secretary*.

GREENE COUNTY.—The Greene County Medical Society met in regular session on June the 7th at 1:30 p. m., in the office of the secretary.

The following was the program for the meeting:

Wounds in their Medicolegal Relations; Incised, Contused, Punctured and Lacerated Wounds.

Pistol Shot Wounds in their Medicolegal Relations.

Infanticide, Evidence of Live Birth; Cause and Manner of Death.

The Legal Status of Medical Expert in this State.

OLIVE WILSON, M. D., *Secretary*.

FRANKLIN COUNTY MEDICAL SOCIETY.—The regular meeting was held June 6 at Ozark, with President Harrod in the chair. Others present were Drs. Turner, Prewitt, Williams, Blackburn, Warren, Butts, Wear, Blakely, Sherbourne and Douglass, eleven in number. This is the largest attendance we have had in a long time. At the request of the president, Dr. Turner talked of conditions as he found them in Oklahoma. He said that most of the doctors there were young men and generally well qualified and progressive. Fees were better than here. They mixed up with homeopaths, osteopaths and chiropractics pretty freely in consultation. He thought doctors were appreciated more than in Arkansas.

Dr. Harrod then led a discussion of the question of better fees. A committee was appointed to draft a minimum fee bill. Dr. Harrod said that our fees are no better than they were before the Civil War. He thought we should coöperate in securing better fees. We should do good work and demand an adequate fee for it. Dr. Harrod remarked that the most ignorant of us know how to "sling pills," but that it takes a shrewd duck to know how to make money.

Dr. T. B. Blakely, Dr. W. M. Wear and Dr. Warren were elected to membership. Drs. Wear and Warren are recent graduates of the Medical Department of the State University.

The program for next meeting includes papers by Drs. Butts and Wear and Case Reports by Drs. Harrod, Blackburn and Blakely.

Adjourned to meet the first Tuesday in July.

THOS. DOUGLASS, *Secretary*.

Personals.

Among the recent visitors to Little Rock were the following: Drs. J. S. Shibley, Booneville; George S. Brown, Conway; C. J. March, Fordyce; F. A. Horn, Lonoke; L. R. Ellis, Hot Springs; J. E. Sparks, Crossett; R. E. Roland, Huttig, and C. S. Holt, Fort Smith.

Dr. and Mrs. C. R. Shinault and daughter, Josephine, sailed from Boston June 10 for a three months' tour in Europe. The doctor will visit the clinics in several of the larger cities of Europe during the summer. He will spend more time in the clinics of Vienna, Berlin, Paris and London than elsewhere. It is safe to say that Dr. Shinault will be greatly benefited in more ways than one by his European travels, and we wish for him and his family *bon voyage*.

Dr. Clark Wood, of Fort Smith, is in Boston taking postgraduate work at Harvard, and will be gone during the months of July and August.

Dr. St. Cloud Cooper and Dr. James A. Foltz, of Fort Smith, will leave the 1st of July for New York and Boston, where they will pursue postgraduate work.

Dr. D. R. Dorente, of Fort Smith, will leave about July 25 for Chicago to spend a month in postgraduate work at the Illinois Eye and Ear Infirmary.

Dr. O. J. T. Johnston, formerly of Floral, is now associated with Drs. Kennerly and Dorr, of Batesville.

Births.

Born—To Dr. and Mrs. M. D. Ogden of Little Rock, Ark., on June 10th, a girl.

Deaths.

Dr. Joseph Price of Philadelphia died of appendicitis on June the 8th, at the age of sixty years. Dr. Price was one of the pioneers in abdominal surgery, a student and personal friend of Lawson Tate and one of the most noted gynecologists in the United States.

Book Reviews.

Merck's Manual of the Materia Medica (Fourth Edition).—A ready reference pocket book for the physician and surgeon. Containing a comprehensive list of chemicals and drugs—not confined to "Merck's"—with their synonyms, solubilities, physiological effects, therapeutic uses, doses, incompatibles, antidotes, etc.; a table of therapeutic indications, with interspersed paragraphs on bedside diagnosis and a collection of prescription formulas, beginning under the indication "Abortion" and ending with "Yellow Fever;" a classification of medicaments; and miscellany, comprising poisoning and its treatment; and an extensive dose table; a chapter on urinalysis, and various tables, etc. Merck & Co., 45 Park Place, New York. 1911; 493 pages. Sent on receipt of forwarding charges of 10 cents, in stamps, to physicians, or to students enrolled in any college of medicine in the United States.

Zahorsky's Golden Rules of Pediatrics.—Aphorisms, observations and precepts on the science and art of pediatrics, giving practical rules for diagnosis and prognosis, the essentials of infant feeding and the principles of scientific treatment. Edited by John Zahorsky, A. B., M. D., with an introduction by E. W. Saunders, M. D.

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CONTENTS.

Original Articles:

Address of St. Cloud Cooper, M. D., Chairman of the Section on State Medicine and Public Hygiene, at Fort Smith, May 2-5, 1911....	30
Sanatoria and Hospitals for Tuberculosis, by J. S. Shibley, Booneville.....	32
Benjamin Rush and Others on Consumption, by J. T. Clegg, M. D., Siloam Springs.....	35
Some Needs of the Hour in Controlling Tuberculosis, by J. D. Southard, M. D., Ft. Smith....	37
Editorials	45
Lost or Stolen.....	45
Medical College Merger.....	45
Report of Delegates to American Medical Association—Joseph T. Clegg, M. D.	46
Department of Syphilology:	
The Present Status of Salvarsan.....	47
Department of Eye, Ear, Nose and Throat:	
Mouth Breathing	48
Killian's Contributions to Diseases of the Nose and Throat.....	49

Communications	50
State Medical Board Notes:	
Resolution on Dr. Norwood Retiring from Examining Board	51
Meeting of State Medical Board.....	52
State Board of Health.....	54
Personal Mention	54
County Societies	54-55
Personals	55-56
Constitution and By-Laws for County Societies	57-58
Officers of the American Medical Association, 1911-1912	59
Officers of the Arkansas Medical Society, 1911-1912	59
State Boards	60
Officers of Component Societies, 1911-1912	60
Members of Component Societies	61-64

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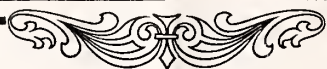
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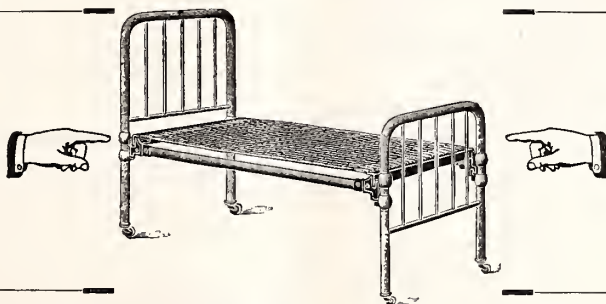
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Original Articles.

ADDRESS OF THE CHAIRMAN OF THE SECTION ON STATE MEDICINE AND PUBLIC HYGIENE, AT THE THIRTY- FIFTH ANNUAL SESSION OF THE AR- KANSAS MEDICAL SOCIETY, HELD AT FORT SMITH, MAY 2-5, 1911.

St. Cloud Cooper, M. D.,
Fort Smith.

As chairman of this section I have been somewhat at a loss to know what to say on this occasion. We are constantly reading in all kinds of public prints about ways and means to obtain and preserve good health, but do we stop long enough to consider what this means to us, and those coming after us?

I do not know of a more noble calling than the one devoted to preservation of health and the prevention of disease. This, to my mind, should have the lead of all other questions before the public; for it means self-preservation, and we are told that self-preservation is the first law of nature.

With enough money, and the public behind the sanitarian, the people would be healthy and happy, for a "sound mind is a

sound body." A man well in mind and body is not usually a disturber in the state, but, on the other hand, he can be depended upon to do the right thing towards his fellow-man.

We do not spend our money as freely as we should when it comes to the question of public health; are we not our brother's keeper? The sanitary laws given by Moses to the Hebrews are models for the preservation of health. These regulations are still "up to date," the longevity of the Hebrew race attesting to this fact.

If the health boards in the state are given support and backing by the public, the public will receive greater dividends from a monetary standpoint than from any other investment. As medical men we are the guardians of the public health, and as a body we are the only people who advocate measures that take away from us our means of support.

Owing to investigation and hard work of the members of our profession, the span of life has been lengthened; unhealthy places have been made habitable, and many diseases which formerly swept away whole communities have now lost their terrors.

Thousands of babies are saved each year by better milk and proper care. The diseases of childbirth have been reduced to a minimum. Tuberculosis, which has caused in years gone by one-seventh of all deaths, by proper sanitary measures and care of the patient, is prevented from spreading to others, and in time will be stamped out by future sanitarians.

Malaria, the scourge of our fertile lands along our rivers; yellow fever, the dread disease of the gulf countries, which for whole months tied up commerce and laid its toll upon helpless thousands; diphtheria, that dread disease of childhood; typhoid fever, the disease contracted by polluted water and contaminated food; smallpox, the destroyer of past generations; hookworm disease, brought to this country by the natives of Africa and causing so much ill health throughout the whole South, and many other diseases are, by modern sanitary measures and treatment, brought under control.

It is high time for the people of this country to wake up and see to it that our rivers are not contaminated by sewage from cities, for, next to air, water is most essential to life. The water supply of a community should be of the purest quality; it should be cheap and plentiful.

While the true physician and patriot is freely giving his time, money and knowledge to better the health conditions of the country, there are those who are working in an underhand way to defeat these efforts. I take the following from an editorial in a recent number of the Journal of the American Medical Association, which clearly shows the activity of the Christian Scientists in matters pertaining to health regulations:

"Under the title of 'Sectarian Legislation,' the Milwaukee Free Press discusses, in a strong editorial, the relation of the State to the practice of medicine. Commenting on the protest made by 'Christian Scientists' against the bill introduced in the Wisconsin Legislature providing for the medical examination of school children, the Free Press says:

"The protest . . . foreshadows a difference of opinion certain to become acute whenever sects become numerous enough to have an influential voice in the framing of our laws. Those who would be the last to interfere with another's religious belief will find themselves constrained to protest against regulating society in general in accordance with the Christian Scientists' construction of the laws of hygiene. For suggestions of disease are conveyed not alone by medical examinations, but by every placard marking a house where some contagious disease is quarantined, by every anti-spi-

ting notice, every sanitary drinking fountain—in short, by every one of the precautions through which modern science seeks to safeguard health and check the spread of disease."

"At present Christian Scientists are living in safety, because they are a fraction of a law-abiding community. But, supposing them in the majority, the enforcement of their views would mean that there would no longer be such a science of sanitation; we should speedily revert to the era of epidemics, smallpox, cholera, typhoid, which are now avoided in crowded cities only by stringent regulation; tuberculosis, with nothing doing to abate its ravages, would soon regain lost ground, and puerperal infection would again number its thousands of victims. Modern therapy is becoming more and more a question of the prevention and combating of infection; Christian Science denies the existence of infection; on this vital issue the two are flatly opposed. Now is as good a time as any to determine whether medical experts and men eminent in research are to be our guides in matters of health."

We find in our own state an organization named "The National League for Medical Freedom." This "League" has recently come into existence in this State, and is active in all the other states. This city has the honor of having most of the officers. Its membership here, as elsewhere, is made up of eclectic practitioners, homeopaths, osteopaths, vitapaths, Christian Scientists and others of this stripe. They pay no dues, but they have a fund furnished by those who are using them. This fund is put up by the manufacturers of "Baby Killers," "Headache Cures," "Bad Whiskey for Medical Purposes," "Manufacturers of Adulterated Foods," "Family Medicines," and other fakers and swindlers—the Patent Medicine Trust.

As is known to all of you, the Patent Medicine Trust is trying to discredit the American Medical Association for exposing their fraudulent practices.

This crowd, the National League for Medical Freedom, has been active to defeat the Hughes Health Bill. They have furnished "copy" to one of our papers, and the editor of the paper, for a consideration, allows this "copy" to go in as an editorial.

In one of these "copies" they shamefully put in quotations of what purported to be extracts from Dr. Dixon's "Oration on Law and Medicine," and when a full text of the oration was furnished the editor, he made a lame disavowal. Copies of this paper flooded the Legislature and will have its effect.

In conclusion, I shall say that we have entered on what has been called the "Health

Era," and those who stand in the way of health regulations will be relegated to the rear.

SANATORIA AND HOSPITALS FOR TUBERCULOSIS.*

J. S. Shibley, M. D., Superintendent of the Arkansas Tuberculosis Sanatorium,
Booneville, Ark.

Life is our most precious possession. God breathed into man's nostrils the breath of life, and man became a living soul. This divine afflatus was God's first, and, next to his Son, his best gift. In his providence he gives us food and raiment, but the life is more than food, and the body more than raiment. Strange it is that many place so little valuation on life. They rush hither and thither, and wear life away in seeking those things that perish in the using; nay, they dissipate health and strength, and life itself, in the gratification of those lusts that drown men in destruction and perdition. It is an index of the low state of our civilization that life is held so cheaply among us; that the state affords so poor protection against homicide, and almost none at all against death from preventable diseases and accidents.

Just as life is our most precious possession, so health is life's most valuable asset. Our beautiful custom of inquiring after the health of our friends is a token not only of our love for them, but of the high valuation which we, by universal consent, place upon health. In view of this high valuation of health, our general disregard of the conditions and measures that make for its maintenance is one of the most glaring inconsistencies of our daily conduct. This inconsistency arises, no doubt, from ignorance of the laws of health and of the conditions in which disease arises and the causes that produce it. The prophet Hosea exclaimed: "My people are destroyed for lack of knowledge." It is even so among us in the morning light of the twentieth century. Our people are destroyed by thousands every year for lack of knowledge. There are half a million unnecessary deaths in the United States every year. Half a million people

die who just as well might live; half a million lives are sacrificed on the altar of ignorance; half a million homes despoiled and millions of hearts broken by preventable deaths.

Chief among preventable diseases stands tuberculosis, the most destructive of all diseases. It destroys more lives than all contagious and epidemic diseases put together—smallpox, measles, scarlet fever, diphtheria, typhoid fever, yellow fever, cholera and plague. Statistics show that, taking the whole population, one death in nine is due to tuberculosis. Between ages 20 to 35 one death in seven is due to tuberculosis. The deaths from tuberculosis in Arkansas are no less than 3,000 every year, and every one of them preventable; most of them men and women in the prime of life—many of them the best and fairest specimens of young manhood and young womanhood.

True it is appointed unto man once to die, but nature never intended that men should die in youth or middle age. Tuberculosis does not arise out of natural conditions. Its cause is of our own making. Being a communicable disease, it is definitely preventable. All that is necessary to stamp out tuberculosis is to stop communicating it. It is not hereditary. It never arises within the body. It is always received from without. Every case is derived from a previous case in man or beast. The conditions of its communication are well understood. The measures necessary to prevent it are quite practicable. The difficulty is to get people to understand, to believe, and to act.

If every person in Arkansas were properly instructed in preventive measures and would conscientiously observe them, there would be no more new cases. It would be cheaper to abolish tuberculosis than to suffer its ravages—cheaper in the sense of costing less money, to say nothing of the suffering and sorrow and loss of life involved. Why, then, do we suffer this wholesale massacre? It is because, to stop it, the whole people would have to act together, and this is something we have not learned to do. We can readily see why the people must pay \$50,000.00 or \$100,000.00 for a court house and jail in Fort Smith. Why not spend \$50,000.00 for a tuberculosis hospital in Fort Smith? Men are worth more than money, and health is

*Read before the Thirty-fifth Annual Session of the Arkansas Medical Society, at Fort Smith, May 3-6, 1911.

more valuable than property. Why, then, do we not spend money for the conservation of life and health as well as for the protection of property? It is because the protection of property appeals to self-interest, while the conservation of the public health appeals to benevolence and patriotism. Each one of us says to himself, "I must pay taxes to support courts and officers to protect me." But when it comes to paying a tax to raise a fund to fight tuberculosis, we say, "Let everyone look out for himself and I will do the same." This is selfishness, pure and simple. As if—

"I lived for myself, I thought for myself,

For myself and none beside;

Just as if Jesus had never lived,

As if he had never died."

But one cannot look out for himself. Another's ignorance or carelessness may give him tuberculosis. Tuberculosis can never be controlled by individual effort. To abolish it men must stand together; and not till we recognize this fundamental truth shall we be free from this blighting, withering curse which exists only because of ignorance and selfishness.

Prevention is the goal to which our best efforts should be directed. Prevention is better than cure. Cure of tuberculosis is difficult, tedious, costly and uncertain, and frequently unsatisfactory. The gratifying progress that has been made in reducing the death rate from tuberculosis in some of the principal cities of Europe and America has been made along the line of prevention, and it is to prevention rather than cure that we must look for deliverance from civilization's greatest plague.

Among agencies for prevention, the sanatorium and the hospital are to be considered at this hour. Sanatoria are for the scientific treatment of early cases, and many of them will be cured. The principal benefit of the sanatorium, however, will be educational—teaching the practical application of the principles of cure and prevention. These, once learned, may be well carried out at home. For an intelligent patient, properly instructed, in fair circumstances financially, and who has sufficient will power to get well, there is no better place for cure than his own home; and for one who lacks the intelligence and will power there is not much hope for cure anywhere.

When we remember that there are not less than 3,000 new cases of tuberculosis in Arkansas yearly, each one of whom needs scientific treatment; and that the proposed capacity of the sanatorium at Booneville is only one hundred, or one in thirty of those who need the benefits which it is designed to confer, we can see how utterly inadequate the sanatorium is to meet the needs of the situation, so far as cure is concerned. If cure is to be our aim, it will require thirty such institutions, which will cost \$3,000,000.00 for building and \$1,500,000.00 annually for maintenance. I think you will agree with me that these are figures quite beyond our reach.

The magnitude of the problem of cure in public institutions stamps it as unattainable and impracticable. So we are forced to set our hopes on prevention. I think that it should be the aim of the sanatorium work to demonstrate the curability of tuberculosis by curing the largest possible proportion of its patients, and to teach, illustrate and enforce efficient preventive measures. The sanatorium should be a lighthouse whence the knowledge of the prevention and cure of tuberculosis shall radiate to every part of the state. A recent writer proposes a sanatorium school where patients shall be allowed to attend for four weeks and receive instruction in the principles and methods of prevention and cure. The idea seems to me a good one, and I believe that instruction—education if you please—ought to be made a prominent feature of sanatorium work.

But when it comes to the actual work of prevention I think we must look to the local hospital for advanced cases as our most efficient ally. The sanatorium is too far removed from the homes of the people to do the most effective preventive work. It is in the homes of the people where tuberculosis has its stronghold, and in the homes of the people is where the battle is to be fought, if victory is to be won. Advanced cases are the ones from which there is most danger of infection, and it will be the function of the hospital to take the advanced cases out of their homes in order to prevent them from infecting other members of their households. This will not be necessary in cases of intelligent and well-instructed patients, who are conscientious in the observance of the well-known precautions necessary to pre-

vent communicating the disease. Such may reside at home without danger of infecting others of its inmates. But there is a large proportion of consumptives who, for want of instruction, are dangerous to live with. Such cases are a possible source of infection to all with whom they come into intimate contact. Another large contingent are unable, for financial or other reasons, to obtain the proper treatment in their homes. These will need the benefit of the hospital.

There is a sharp distinction between the work of the sanatorium and that of the hospital. The sanatorium is for the cure of tuberculosis, and only cases in the earliest stages of the disease should be sent there. To send advanced cases to the sanatorium is to require of it something that it cannot do—i. e., to cure the incurable. The presence of incurable cases hinders the cure of other inmates of the sanatorium, and they occupy the places that ought to be assigned to those who have a better prospect of recovery. Moreover, the treatment that is proper for curable cases is not well suited to advanced ones. The former is curative, the latter is palliative. The one is designed to cure and is somewhat strenuous, while the other is designed to soothe the sufferings attendant on an incurable malady. The care of advanced cases requires facilities which the sanatorium does not possess, and places on the sanatorium a burden of expense out of proportion to the results achieved—results which can be better attained, and more cheaply, in hospitals designed for this class of cases. From every point of view it is wrong to send advanced cases to the sanatorium.

A hospital for tuberculosis ought to be situated near the homes of the people it is to serve. It is both costly and cruel to drag a moribund patient the length of the State to find a place in which to die, and then, after he is dead, ship his body back home for burial. Patients carried far away from home are separated from loved ones whose presence and tender ministrations ought to soothe and sustain them in the last scenes of the drama of life. Build your hospitals near enough to the homes of your patients that their friends can visit and minister to them.

In some of the older states the law empowers the counties to levy a tax to build county tuberculosis hospitals; or two or more counties may combine to form a hospital district. The counties have power to levy a tax of one-half of one per cent, and this amount may be doubled by a vote of the people. I think the county hospital plan a good one, and every county ought to have its tuberculosis hospital.

In addition to the sanatorium and hospital, some communities have the dispensary. This is a place to be visited by patients where they may be examined by skilled physicians to determine whether they have tuberculosis, and in case tuberculosis is found, proper treatment is recommended. Trained nurses also visit patients in their homes and instruct them in preventive measures. The dispensaries act as feeders to the sanatoria and hospitals, patients being directed to the one or the other as their condition may require. Pennsylvania established one dispensary in each of her sixty-seven counties, and so well did they serve their purpose that forty-five others were established in towns and county seats, making 115 in the state. This seems to me to be a very useful plan, and quite feasible. The cost will be small compared to the good to be expected from it. An office consisting of three or four rooms would suffice for a beginning. Two or three physicians and a pharmacist could attend two hours a day on week days, each having his certain days and hours to attend. Or one physician could give his whole time to the work. It would not be expected of the dispensary physician to visit the patients in their homes. The dispensary is for ambulant cases only, and cases of illness requiring treatment at their homes would fall into the hands of the family physician.

The time has come when every community must take hold of the problem of tuberculosis within its own borders. To depend on the state sanatorium is to lean on a fragile staff. The problem is a local one and must be met by local measures. The great destroyer is present in every community, and he must be met and vanquished on every field. No state institution can meet the needs of the several communities. While the war against tuberculosis is world-wide, it

must penetrate into every community and every home. The most that a state institution can do is to lead in the fight. All classes of people must be reached and taught. The rich, the poor, and the great middle class must be enlisted. Nor must the colored man be neglected. The races are so closely associated that the diseases of one are readily communicated to the other. They come into our homes as servants and bring the infection with them. If we would rid ourselves of tuberculosis we must at the same time deliver them from it.

In conclusion, let me ask, what are the good people of the live and progressive city of Fort Smith, the metropolis of western Arkansas and eastern Oklahoma, going to do with this burning problem? I suppose that half a hundred people die in your city every year from tuberculosis—one every week—as many as were killed in the great cyclone that devastated a part of your beautiful city a dozen years ago. I am afraid that the actual facts are worse than that, but that is bad enough to rouse you to action. Are you going to sit idly down and permit this terrible slaughter to continue? I cannot, I will not believe it.

In a fire in the Triangle Waist Factory in New York City, 153 girls met a horrible death the other day for want of fire escapes. The managers of the factory have been indicted for criminal negligence in not making provisions beforehand for the escape of the girls. Fifty of your fellow-citizens died last year and fifty more will die this year, and fifty the next, and fifty the next, and so on unless you provide means of prevention. Will you be guiltless? The cases are strictly analogous, except that in tuberculosis the responsibility is on the whole community, but it is none the less real because so widely distributed. For my part, I should not feel guiltless if I did not contribute my mite of influence to stay the plague.

Would that I had the eloquence to depict the situation in all its terrible reality, that you might be stirred to action and inaugurate a preventive movement in Fort Smith that would spread to every city and town in the State, and go on increasing and gathering power till tuberculosis would be eradicated from our fair State.

BENJAMIN RUSH AND OTHERS ON CONSUMPTION.*

J. T. Clegg, M. D.,
Siloam Springs.

To live in the twentieth century is to live longer, to see more, to do more, to know more, to love more, to enjoy more than did our ancestors. Spirits, bad angels, or devils, no longer haunt the abodes of men or play upon them any kind of diabolical pranks, or infect them with disease. Man, instructed, ceases to be superstitious.

Science melted a little sand, ground a lens and made a telescope, and discovered that our condition, whether good or bad, whether in health or disease, is not caused by the conjunction of the stars. Science also took another piece of sand and ground another lens and made a microscope, which has brought to view countless real enemies to health and life in the shape of germs or microorganisms. However, through the long eras of ignorance, superstition and dogmas, at all times there lived someone who doubted, someone who dared to question the accepted beliefs of his time; some iconoclast who did not hesitate to break an idol, be it ever so sacred. Free and patient investigation of any subject has always revealed some new truth, some new fragment of the eternal logos that make life the better living. Any truth, however small, is parent to a larger truth.

Tuberculosis was known to the ancients. Hippocrates wrote a book on it. As an illustration of what the ancients knew of the contagious nature of this disease, I will ask your pardon for copying the following from John Mason Good: "Where a consumptive diathesis has once originated, it is often very evidently transmitted to succeeding generations, and there is great reason to believe that the disease is in a certain degree contagious." Aristotle appeals to it as a matter of general belief among the Greeks in his day, and it has been assented to in succession by Galen, Morton, Hoffman, Vogel, Desault, Darwin, and most modern writers. Galen thought it right to caution attendants

*Read before the Thirty-fifth Annual Session of the Arkansas Medical Society, at Fort Smith, May, 3-6, 1911.

upon consumptive patients against the danger of living constantly about their persons through the whole course of the disease. (Good's Study of Medicine, 1834.)

On the other hand, N. Chapman, as late as 1844, stoutly denies its contagious nature. Again, Good says: "The diathesis strictly consumptive is usually associated, in the language of Hippocrates and Aretaeus, with smooth, fair and ruddy complexion, light or reddish hair, blue eyes, a long neck, narrow chest, slender form and high shoulders; or, in the words of Hippocrates, 'shoulders projecting like wings,' and a sanguine disposition. In some instances, however, the skin is dark and the hair almost black."

From the time of the Greeks to the beginning of the nineteenth century nothing new was learned, and much that then was known was afterwards forgotten until the beginning of the nineteenth century.

Following soon after the French revolution, that great social upheaval that was parent of a new civilization, that opened the door of free thought and lifted many handicaps from scientific investigation and progress, there developed a group of men who made another epoch in our knowledge of diseases. I allude to Broussais, Laennec, Louis Andral of France, and Dr. Benjamin Rush of America.

Broussais, a surgeon in the French army, had splendid opportunities to study the gross pathology of disease. While many of his conclusions were perhaps erroneous, the recorded facts of his postmortem findings were and are yet very valuable. His reports of cases give in detail the clinical history from the time they came under his care to the end, as well as a detailed description of the postmortem findings.

Contemporary with Broussais was Laennec, who died in the prime of life at the age of forty-six, of consumption. Laennec developed and taught the art of mediate auscultation and percussion and invented the stethoscope. The value of the teachings of Laennec was almost immediately perfected by Louis and Andral. Two remarkable statements of Louis are of interest and worth repeating: First, "That after the age of fifteen tuberculous matter never presents itself in any tissue or organ unless it exists also in the lungs." Second, "When pneumonia makes its appearance in phthisical subjects, who

are still able to pursue their occupation and when strength and flesh have not yet diminished materially, the affection presents the ordinary series of symptoms characterizing it in previously healthy persons with a tendency to recovery."

Perhaps the greatest man who wrote on the subject at that time was the American patriot, statesman, moralist, scholar and physician, Dr. Benjamin Rush. The conclusions of Dr. Rush, under the present light of science, are of but little or no value, except those in the care and treatment of the disease. Many of his suggestions of treatment are surprisingly modern; for instance, he says: "From all these facts it is evident that the remedies for consumption must be sought for in those exercises and employments which give the greatest vigor to the constitution." While he was a strong advocate of bleeding, in what he denominated the inflammatory stage of the disease, as a palliative remedy, and relates many cases to prove its value, he does not advocate it in the other stages which he designates as the hectic and the typhus, though he mentions many other palliative remedies. His suggestions for the radical cure of the disease can be summed up in the very modern advice of "good food and proper exercise in the open air." His theory of the disease was that it is a constitutional condition, with local lesions, and he suspected it was contagious.

Dr. Rush's observations were limited to its manifestations in a new country and among a primitive people. He made the statement, about the year 1800, that the disease was rarely seen among the American Indians. This is far from true today, and was not true as early as 1830, as Morton declares it was very prevalent among them at that time. Dr. Rush was the first physician to recommend sanatorium treatment for consumptives. The following are a few of his observations in regard to the longer or shorter duration of the disease:

"Prognosis.—It is more dangerous when a predisposition to it has been derived from ancestors than when it has been acquired. It is generally fatal when accompanied with a bad conformation of the chest. Chilly fits occurring in the forenoon are more favorable than when occurring in the evening. Rheumatic pains attended with an abatement of the cough or pains in the chest are always

favorable; so are eruptions or an abscess on the external part of the body, if they occur before the last stage of the disease. A sudden cessation of cough, without supervening diarrhea, indicates death to be at hand. A constant vomiting in consumption is generally a bad sign. Feet obstinately cold, also a swelling of the feet and face during the night, commonly indicates a speedy and fatal issue of the disease. Lice and falling off of the hair often precede death. A hoarseness in the beginning of the disease is always alarming, but more so in its last stage. A change of the eyes from blue or dark to a light color, similar to that which takes place in very old people, is a sign of speedy dissolution. I have never seen a recovery after aphthous sore throat took place." He also states that he had never seen a dry tongue in any of the forms or stages of the disease.

Dr. Rush lived to advanced age, though he confessed to have inherited a predisposition to the disease from his paternal ancestors and to have had many symptoms of it from his eighteenth to forty-third year.

Benjamin Rush was not only a patriot, philanthropist and statesman, but a physician who is said to have had the largest private practice of any physician in the city of Philadelphia. His writings are not very voluminous, but refer to many subjects and are well worth reading. His purity of English and conciseness of style might be imitated with advantage by some of our modern medical writers of today.

From the end of the first to the beginning of the last two decades of the nineteenth century, while much was written, nothing was learned of tuberculosis. It was in 1882 that Prof. Koch revealed the tubercle bacillus and demonstrated it to be the cause of the disease, thus uncovering the enemy in its hiding, enabling the sanitarian to organize a campaign against it on a rational basis, as will be explained to you later by Dr. Southard.

I would not have you to infer that there are yet no impediments existing in the way of scientific research. There are various fadists, pseudo-sentimentalists, sensationalists and anti-vivisectionists who are exerting every conceivable influence to impede the work. They have succeeded in almost abolishing all

original research in England, and they are striking at it in Germany. They are crippling it in America to the extent that our best knowledge today is coming from Japan, Russia, and other points in the far East. It behooves us, then, to be ever on the alert, remembering that eternal vigilance is the price of knowledge as well as liberty.

SOME NEEDS OF THE HOUR IN CONTROLLING TUBERCULOSIS.*

J. D. Southard, M. D.,
Fort Smith.

If I were to ask this audience to name the two greatest and most important problems that could engage the minds of men, a majority of you doubtless would say the salvation of the soul, first of all. Then, after a little reflection as to the second, I think every one would say, the conservation of human life and health. Now, it is to the consideration of the most important phase of the latter problem that I invite your attention this evening.

The first decade of the twentieth century marks the greatest epoch in the history of science. The greatest glory that has ever crowned the labors of mankind is the glory of preventive medicine of the present decade. The basis of all happiness is the life, health and welfare of those we love, and the success of every human enterprise and every intellectual pursuit is rooted and grounded in their physical, mental and spiritual well-being. It follows, therefore, that whatsoever is most destructive of life and health is the greatest enemy of our race and should receive first attention and consideration by all rational men and women. While war, famine and plague destroy their thousands, tuberculosis destroys its tens of thousands. It is a sad commentary upon the intelligence of our generation that, knowing how to prevent tuberculosis, and knowing that it destroys more human lives than any other single agency in the world, we as yet are doing so little to stem this tide of human destruction. Upon the people of every age and nation, according to their intelligence and opportunities, rest certain obligations and re-

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sponsibilities. Much will be expected of those to whom much has been given. We owe it to our children and to all who shall live after us to transmit to them the blessings of life and health which we ourselves enjoy, together with such additional freedom from disease as an intelligent use by us of all the knowledge and means we possess can give them. We should be interested in transmitting to posterity not only freedom from tuberculosis, but from all other communicable diseases as well, thus insuring health, happiness, long life and prosperity, and increased physical and mental vigor and strength.

It is our duty, and we should consider it a privilege, to do what we can to check and prevent the ravages of tuberculosis, and I believe the greatest need of the hour is that all men, women and children should know that it is not an inherited disease, but is communicable, and is always communicated from a former case, in man or the lower animals, and that it is absolutely preventable. They should act upon that knowledge as becomes their intelligence, and redeem the world from the thralldom of this plague.

The greatest good to humanity that has ever crowned the efforts of man would follow as a result of a united movement in utilizing the knowledge and means we now possess in the work of preventing tuberculosis. It would be a grand scheme if all the great world powers would gradually reduce their armies and armaments and enlist their millions of men and money in the war against tuberculosis and other preventable diseases; but I need not encourage you to indulge in anything vain or visionary with reference to the control of tuberculosis. If we but make proper use of the means and methods now easily within our reach we can soon accomplish results that will astonish the world and continue to bless mankind from generation to generation, and from age to age.

But it were better for us had we lived in the dark ages than in the twentieth century if, like the slothful servant, we bury the talent, which, in the knowledge of how to prevent tuberculosis, science has given to us. There is an inclination upon the part of the public at the present time to leave this work entirely too much to the physicians of the country, and to expect them, without even the sinews of war, to conquer this disease.

As well might the United States government expect its officers to do battle and win victories without soldiers or sustenance. Physicians everywhere are ready to lead and direct the fight, but the people must enlist for service; the country must sustain this great cause, or victory will never perch upon our banner.

Tuberculosis is not a delusion; it is a deadly disease. To control it we need and must have sane sanitary laws and regulations, with men of science, judgment, ability and courage paid to enforce them. We are well advanced in the knowledge of how to prevent and control tuberculosis and other communicable diseases, but centuries behind in the practical application and utilization of this knowledge.

Everyone should know that until provisions are made for the institutional care of advanced, as well as incipient cases, it is and will continue to be impossible to control and prevent the spread of this disease. Everyone should know that tuberculosis is curable only in its earlier stage, and that life often depends upon an early consultation with a physician, which is the only means by which its presence may be discovered early, and proper means instituted for its cure. In this connection it is well to bear in mind that nutrition is the principal means whereby a cure or arrestment of the disease is accomplished, and therefore plenty of wholesome nourishment is of prime importance, while fresh air, sunshine and cleanliness are necessary adjuncts.

Every home should have a somnaerum, or open-air sleeping apartment, properly screened and curtained, with accommodations for the entire family. In this climate such an apartment is at once a luxury and a necessity. It should be used six months of the year, during the warmer season, while during the coldest weather all windows and doors of sleeping rooms should be kept wide open all night, except during storms. While this is being practiced in our homes, attention should be given to the proper ventilation of all public buildings and conveyances, such as schools, churches, lodges, theaters, street cars and railway coaches. Laws on public hygiene and sanitation should be rigidly enforced.

It has been said that we are "money mad." As to the truth of this I cannot say.

But that we do devote proportionately too much time and attention to matters of business and too little to the weightier matters of health, life and death I think there can be no question. The trend of the public mind today, relative to health matters, is generally wrong, and needs to be readjusted by the light of modern sanitary science. What are our churches, lodges, clubs and societies doing to prevent tuberculosis among their members, or for the physical welfare and uplift of humanity? Statistics show that the death rate among our church members from tuberculosis is 10.4 per cent of the total deaths from all causes, and doubtless it is as high among all other benevolent organizations. Tuberculosis is a preventable disease. Think of it! Such appalling facts ought to suggest to all these good organizations that the time has come for them to extend the field of their activity and usefulness in their own interest as well as in the interest of others.

Many poor and helpless people are suffering and dying of this disease who could and should be saved, while we, as church and lodge members, continue to build fine and costly edifices and pursue our daily, weekly and monthly routine, seemingly willing for tuberculosis and all its victims to take care of themselves as best they can. Every church and order should have a tuberculosis committee and sub-committees for work, not only among its own members, but for the general good of all and against the common enemy. It should be a pleasure, as it is, I believe, a sacred duty, for those of us who enjoy the greatest blessings God can give—health and life—to give of our time, our energy and our substance to this great cause. If we provide a hospital bed for one poor, helpless consumptive, we not only perform the office of the good Samaritan to him, but remove a danger from his family, friends, and the public. Healing the sick is a great and noble work, but the prevention of a disease is far nobler and greater still, for if half the sick on earth were healed they might soon be sick again.

Every physician and layman, everyone who has had tuberculosis in his family, should interest himself in spreading the gospel of prevention, until everyone shall

know the truth—that tuberculosis is communicable, preventable, and not hereditary. All people should be admonished to aid and co-operate with the health and other authorities in all preventive measure efforts. Doctors and nurses know that this disease is communicable, and, though they are more exposed to it than any other class, they rarely ever contract it, because they know of the danger and how to avoid it. This important knowledge is available for all.

The state should provide for the testing of all cows for tuberculosis, for the inspection of all animals, cattle, hogs and sheep before and after slaughtering, and for the destruction of all found infected. We cannot expect to prevent the spread of this disease so long as our children drink milk from tuberculous cows and we eat tuberculous meat.

To vital statistics we must go for the pulse, temperature and respiration of our race. Birth, life and death—the start, the race and the finish—are the three most important periods in our existence, and determine the destiny of every state and nation.

Arkansas was admitted into the Union seventy-five years ago, but as yet has done practically nothing for obtaining and recording vital statistics. Medical inspection of schools, dental hygiene, intemperance and child labor, important as they are in the prevention of tuberculosis, must be passed over for the present for lack of time.

And now in closing, let me say, the time will come, and it may be soon, when it will be found necessary to take steps to deal more firmly with tuberculosis. And why not? To those who must be exposed to it by patients who are ignorant and persistently careless, it is more dangerous and deadly than smallpox, diphtheria or scarlet fever. The report of tuberculosis to the health authorities is important and necessary, and should be made compulsory; but in this, as in every department of health work, we are hampered by the lack of modern health laws and regulations. Finally, if we would achieve the greatest success in this, as in all humanitarian work, we need to cultivate that spirit which characterized the life and labors of the Man of Galilee.

DISCUSSION ON THE PAPERS BY DRS. COOPER, SHIBLEY, CLEGG AND SOUTHARD.

Dr. J. F. Haynes (Fort Smith)—It would certainly be slighting the situation, as well as the authors of the papers, if no one arose to say at least a word of commendation of these three valuable contributions. During the reading of these papers I could see that we were pointed out various kinds of ladders, such as "Jacob's Ladder." I might enumerate others, such as the fire ladder, which rises to the upper windows of high buildings, and rescues those who are about to be destroyed by that great element of destruction, fire. The disease germ of tuberculosis needs no ladder to climb up or down. It is an aviator. It has its airships already prepared. You find millions of airships in the houses of the rich; you find billions in the houses of the poor. A man builds a good house after he gets to be forty, when he has made his little pile. He builds it with tight doors, tight windows, and fires to supply heat. He has got to have all that is coming to him. He is like the man who sits down at a restaurant and pays a dollar for a meal. He wants to eat all before him in order to get his dollar's worth. He wants all the heat there is to warm up the house until his wife and children are made hot-house plants, and in the midst of all this, is this furnace doing its work, pouring air into the house carrying little particles of dust, and on each little particle sits a smiling little imp, a tuberculosis germ. Carried around by the little gusts of wind that come and go, a family that is going along very nicely in a commonly constructed house, with windows that would be opened at pleasure, are now the victims of the disease. The rich are in danger. God help the rich; the poor can take care of themselves. The poor, on the other hand, are in danger because of filth—filth trod upon, filth to roll in, filth unthought of; dust particles everywhere. No one cares; no one knows that the dust particles laden with disease germs flood onward, upward, downward, around and about and find their way into the nasal cavities, into the mouth, on to the food, and thus into the system. So it is that we are exposed to disease germs.

Many years ago when scientific writers were attempting to describe something very bad before an audience, they would tell you of the great "Black Hole of India," where

many lost their lives; they would tell you that the loss of life was due to what? To carbonic acid gas. That doesn't kill anybody. There are other impurities in that atmosphere that are making it very unhealthy, and, as the number of units of carbon-dioxid or carbonic acid is increased, so the danger increases from these dangerous agents.

Poor ventilation, poor heating and poor lighting are sources of ill health. Very few people understand that these matters are productive of incalculable harm. The people don't want to understand these things; they are contrary about it. They would rather swig patent medicines.

Dr. Nina V. Hardin (Fayetteville): I want to ask if this is a Presbyterian audience, and if women folks can talk a little, too? I just want to say a word, not so much about the papers read, but just about the lack of people here to hear the papers when they are read. I think some means ought to be had by which the public may hear what the doctors have to say when they have an opportunity to say it. It is discouraging to talk to a lot of empty benches. It seems we ought to fall upon some plan to induce a better attendance at these meetings.

Dr. Morgan Smith (Little Rock): I wish the time would permit me to discuss at length each one of the papers read, but it will not, and I shall confine my remarks to some thoughts brought out in Dr. Cooper's paper, the one especially which refers to the unreasonable opposition which is sometimes shown by the people in our attempts to enact wholesome public health laws. I take it that we could aptly paraphrase the patriotic expression of Patrick Henry, which moved his country in the early days when the colonies were striking for liberation from the British yoke. He said, "Give me liberty or give me death." In the light of our present needs I would say, "Give me health or give me death." General conservation is one of the most prominent questions now before the American people, and in this movement, the saving of human life by the prevention of disease, these agencies and activities which make for a better civilization and a better race are being invoked by the medical profession. You remember very well the "Boston Tea Party;" the groundwork is being laid

for another one along different lines, but whose results will be as everlastingly beneficent in the cause of life, liberty and happiness.

I do not mean to imply that in this determination to throw off the yoke of preventable disease that great national distress or carnage will swoop over the country, but I do mean to say that there is now being worked out in the minds of the American people the plans of a sanitary war that are going to result in inestimable good to humanity and society at large. The enemies of public health legislation are perniciously active. They are banded together in bonds as indissoluble as those which bind the Corman of Italy. That man who, in ambush, would take the life of a fellow-man is not less guilty than he who would oppose the enactment of wise and sane laws for the protection of innocent women and children. The assassin in ambush takes away only one life; the National League for Medical Freedom would take a thousand by indirect legislation. If the professions and theories of those who individually and collectively compose this National League of Health Perverts were put into execution, the doors of the Rockefeller Institute for Scientific Research would be forever barred; cerebrospinal meningitis would sweep our country of its babies; smallpox would again sear the faces of our fair sons and daughters; the horse would contribute no more serum, and diphtheria would stalk unmolested over our cities; the population of the cemeteries would be increased, and all the peoples of the earth would suffer thereby. Unless I fail to read clearly the signs of the times, the vaporings of this motley tribe must sooner or later be reckoned with in no uncertain manner.

It has been known for many, many years that tuberculosis is preventable, and furthermore that it is curable. This statement is in direct opposition to that un-Christian theory which postulates, "There is no disease." Tuberculosis is killing its thousands, and our profession is engaged in a battle against this reaper of death. Sanitation, which of course stands for preventive medicine, is the weapon with which we hope some day to gain mastery over disease. In this struggle for the betterment of mankind, the States should see to it that the unreasonable oppo-

sition of pseudo-religionists and commercial combinations should not interfere with the sublime duty of the medical profession.

Dr. Shibley has very appropriately quoted Scripture to emphasize his statements, but my memory of the Scripture is so poor I do not think I could make an absolutely correct quotation. But I have as much right to write Scripture as St. Paul, provided I tell the truth, so I would say: "What would it profit a man if he gained the whole world and lost his health?" Economists and sociologists agree that the greatest asset of the family, as a whole, is to be found in the health of its individual members. If this statement is true, then the greatest asset of the State of Arkansas will be found to be in the health of its citizens. And applying this thought further, as suggested by Mr. Roosevelt, the greatest asset of the United States will be found in the condition of the health of all the people.

These papers are indeed opportune, and are worthy the Arkansas Medical Society. This society has ever stood for preventive and progressive medicine. It has yet to shirk its duty, and whenever exigencies of public health seem to demand that something be done in the interest of the people, it has through its organized legislative committees and officers come out openly and frankly before the people with those plans intended for their benefit. This society, through this section, is doing splendid work. These papers will reach the public, and in course of time results will be seen. Education of the public is slow, but once informed of the danger of preventable diseases, the time will come when the cohorts of the Devil's Leagues and their un-Christian angels cannot prevail against sanity and sanitation.

In the bulletin of the Indiana State Board of Health is related a story which should be read by everybody. The story goes: One morning the hireling of a farmer discovered one of his hogs groaning with a pain in his belly, and, the farmer's attention being called to the trouble, he at once made a diagnosis of hog cholera and wired the Agricultural Department at Washington for help. Immediately trained experts were on the ground with their apparatus, and soon all the hogs in the neighborhood were injected with prophylactic doses of serum. The hog

that was sick got well, and there were no new cases among the others.

One day a poor little mother with two children began to grow tired and weary; her work became burdensome to her. She began losing flesh, a flush appeared on her cheek, and her pulse beat fast. She developed a little cough, and applied to her family physician who gave her some remedy for a supposed bronchitis. She did not improve, but continued to grow weaker, when one day a salty taste came in her mouth, a peculiar sensation in her chest, and she spat up a mouthful of blood. The hemorrhages began to recur, and it was recognized by all that she had tuberculosis. She wrote to the secretary of the State Board of Health and said: "I understand the state has some place to which a poor mother with tuberculosis can be cared for. I have two children that I wish to rear. I am ambitious for them and do not want to die. Can you help me in my distress?" The secretary of the Board of Health replied: "We have no place for mothers with tuberculosis. I know of but one place to which you can go, and that is to the grave. When you die the state will find a home in one of the orphanages for your children, and they will be cared for at the expense of the commonwealth."

From a hog you can obtain hair for pillows and mattresses. You can make sausage out of the red meat, you can render the fat into lard, and you can take the hoofs and make glue, thus converting a lower animal into commercial products for the use of the higher animal. The moral: Out of boys and girls you can make only men and women. Which would you rather be—a hog or a boy?

Dr. Summers—I want to make one suggestion, and it rests in my mind as being of paramount importance in connection with this subject. We meet as medical men in our various conventions and discuss these questions over and over. We formulate resolutions, we theorize, we do a great many things; but to my mind a reduction of this problem to a practical fact is the question that is confronting us most seriously. We want to make this question a practical one. Allow me to make a suggestion as to how we, as medical men, can accomplish to some extent, at least, that fact, and pave the way for rendering the question practical as a

great public question. This is a question largely of education; not only the education of the physicians of our country—and many of us, let me say it to our shame, need education along these lines—but the education of the masses of the people, not only of the larger towns, the more intelligent class of people, but in the rural districts, the backwoods places, where everywhere human beings move and thrive, this question needs to be taught. In every community everywhere—in the thickly populated communities, in the more intelligent communities of our land as well as in the more remote sections—the medical man is the instrument of this education if he is what he should be. This gives him an opportunity to make this question a practical one in dealing with the people.

Let me suggest here that we may come before the people as medical men without appearing presumptuous to them in a great many ways, and we may, little by little, pound these ideas into their heads and educate them to a better understanding of this question.

In the first place, we may reach them in their homes. We are called to see a tubercular patient. We go in and prescribe a little medicine, we get in our buggy and pull out for home, refusing even to tell the patient or the family that we suspect the patient has incipient tuberculosis, leaving the family in profound ignorance of its dangers and allowing the other members of the family to contract the disease from the already diseased patient. Are we not culpable? Isn't it a shame and disgrace that we, who know these dangers, fail to warn the family? But many of us do, and I say it to our shame.

Again, we may reach the public through our public schools. We have public schools in every community. Let us go to the teachers and say to them, "We would like to come before your school on a certain occasion, at a certain time, and talk to the students on the subject of public hygiene or school hygiene. We would like to come before them and talk to them." And then let us go to our office and sit down for a quiet moment and work for an hour or two on the literature we have before us and formulate a few simple expressions, so that we can bring before the young mind as well as the teacher the necessity of this work. I say if we will

get down to these matters in a practical way we can educate the people, and by and by to do away, to a large extent, with this very prevalent, widespread indifference that has been shown here to be so well developed.

Dr. R. C. Dorr—I just want to endorse the papers read here tonight, and endorse the statements of every physician who has talked on this subject. I don't know that I could advance anything new, only in the way of some experiments that have been made. You can take a rabbit and put it in a room where there is consumption, and in ninety days that rabbit will contract consumption and die. That is what goes on in the backwoods and goes on anywhere, and that is what goes on with the children. These germs are spat on the floor. The children play on the floor and wallow in them. These germs take on a rapid growth at puberty, and then the individual contracts tuberculosis because the resisting power is reduced. There is something in this sanatorium business, but to my mind it is a question more of education of the people. The sanatorium may cure a few cases, but the trouble is, as has been pointed out by Dr. Shibley, these cases will not go there in the proper stage. If you are going to send your patient to a sanatorium, don't wait until you find the tubercular bacilli. It's too late. Send him early. The people are not ready for it. It won't be done unless you get in the backwoods and educate these people, and in the alleys in the cities and take these children and keep them from getting infected. You have to get to them, and until you do that there will be but little accomplished by a sanatorium in Arkansas or any other state, except as an educational institution.

I haven't been to the sanatorium. I know it is run in good style and doing the best it can under the circumstances, but patients are sent there too late. I sent one down there myself. I found the tubercular bacilli, but the patient thought he was kept too cold. He didn't anticipate he would be there long. He thought he would be back in two or three weeks. He is now dead. And that is the trouble. When you get a Department of Health and get right down and reach the thing at the foundation, you will get results. The time to reach it is when these children can be kept from being infected. Sunshine itself is one of the greatest preventives we

have, because it has the power of destroying the tubercular bacillus. It does not live in the sunshine, and if your children must play, let them play in the sunshine, because that is the safest place for them.

Dr. J. C. Amis (Ft. Smith)—I don't know of anything that could be said that would add to the interest of these papers. I don't know of anything that could be said that would cover the field more thoroughly than the essayists have with their papers. I don't think there is very much to discuss about the papers, because they are as excellent as any treatise we could have had on tuberculosis, its prevention and cure. The thing that is a mystery to me is how men of intelligence can hear papers like these and go home and go to sleep, and yet have no interest in the prevention of tuberculosis and other diseases in the community in which they live. It seems to me that they would be so excited that they could not sleep at all. I don't see how they can be quiet and hold their tongues. I do not understand how, when men are called into legislative bodies, and health measures affecting the whole people are brought up for consideration, they can let their hands hang down. Much less can I understand how men can come up and fight these health measures. I believe we have depended too much on men, with their indifference. I believe if the mothers of Arkansas could realize that their children were being swept away by diseases that are absolutely curable and absolutely preventable that they would be the very ones to rise up and say to these fellows running around the streets talking about medical freedom and medical liberty, this, that and the other, "You cannot murder my children!" I think that will be the final solution of it. I believe when the mothers see the danger, and they can realize that these things are preventable, and that it is their children who are being sacrificed on the altar of these cults when a proposition is up that affects them and their children, that they will throttle them in the beginning and say, "You shall not do it."

I feel that it is a compliment to this meeting that we have ladies here tonight. I feel that when they go home they will say to their legislators from their districts, "You shall not go to the legislature unless you

vote right on public health matters." And I tell you, men, when your wife gets after you, you are going to do what she says (Laughter). I have tried it; I know. There is no getting away from her, and when they stand up and say, "Sir, you shall not send to the legislature men who will fritter away the time and let our children die by things that ought to be prevented, we are not going to tolerate it, and I tell you, you must line up and vote right," you will select the right sort of men to go to the legislature. I realize I am not discussing these excellent papers; I am not trying to. I am just telling you the way I see it. I think that is the way.

Dr. Southard (Ft. Smith)—I want to report an incident which recently occurred in a city of one of our neighboring States. There was a meeting called for the purpose of organizing an anti-tuberculosis society. This meeting was attended largely by physicians, as such meetings usually are. After the organization committees were appointed, one of which was a committee on finance, of which a young physician was made chairman. On the following day he organized his committee and started out to see what he could do in the way of collecting funds to carry on this work. Among others upon whom he called was a wealthy business man of his acquaintance living in that city, and after explaining the purpose of the society, asked for a contribution. The gentleman took out his check book and wrote a check for a very small amount and handed it to the doctor, who thanked him and withdrew. Two years later, in the same city, this wealthy business man met the young doctor and said: "About two years ago you came to my place of business and asked me for a contribution to aid in the work of preventing the spread of tuberculosis. I wasn't interested in tuberculosis at that time, and the mere pittance I gave you I gave simply to get rid of you, because I had another engagement that I wanted to keep. At that time, doctor, my only daughter, a bright girl eighteen years of age, was away at college, and was, as I supposed, in perfect health. But soon after that I learned she was declining in health, and a little later that she had tuberculosis, which she had contracted from her

room-mate. I took her out West and gave her the best treatment known, but the disease ran a rapid course, and all I could do was of no avail. I have just buried her over there in Cave Hill Cemetery. Now I am interested in the prevention of tuberculosis. I know it is too late, but I would like for you to come to my place of business and I will try to make amends for my past neglect." This, my friends, is an illustration of what it sometimes takes to awaken the people.

Dr. J. S. Shibley (Booneville)—There is one thing I wish to impress upon the mind of every medical man in the state of Arkansas. There have been 176 patients enrolled in the sanatorium since the first patient was received, August 2, 1910. One hundred and twenty-one of them remained a period of thirty days or longer. I have recently made a study of those 121 cases, and of these, only twenty-four were classed as first-stage cases. Now, you see what a load the sanatorium has to carry. Out of 121 patients, we have one-fifth in the curable stage, and four-fifths who have come to us too late. It is enough to make one's heart bleed to see the poor creatures that come to the sanatorium. Not very long ago a man came to the sanatorium who had to be assisted up the steps. We put him to bed, from which he never arose. Gentlemen of the medical profession, to send these advanced cases to the sanatorium is to make it a mortuary home and not a place for cure. I beseech you, don't unload your incurable cases on the sanatorium.

Dr. Smith (Little Rock)—I wish to introduce the following resolution:

"Be it resolved, That this section, attended by the members of this society representing every county in this state, and many citizens of Fort Smith, unqualifiedly endorse Senate Bill No. 451, known as the Public Health Bill; and

"Be it further resolved, That the members of the House of Representatives be urged to give their support to this bill to the end that it may be enacted into law."

Dr. Amis (Ft. Smith)—I move that the resolution be adopted.

The motion was seconded and unanimously carried.

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OF THE

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All communications to this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the State. Notice of deaths, removals from the State, changes of location, etc., are requested.

ADVERTISING RATES.

A schedule of rates will be furnished upon request.

CHANGE OF ADDRESS.

Change of address will be made if the old as well as the new address be given.

ANONYMOUS COMMUNICATIONS.

No anonymous communications will appear in the columns of this Journal, no matter how meritorious they may be.

NOTICE.

All changes of address should be sent to Dr. C. P. Meriwether, secretary of the State Society, as he furnishes the mailing list each month of our members. All communications for publication should be sent to the editor not later than the 5th of each month.

Editorials.

This issue contains a copy of the constitution and by-laws for county societies. It would be well for all county societies who have not already done so to adopt this form, making such changes as local conditions demand. We would also suggest that all county societies determine on a definite date in December for the annual election of officers and the collection of dues.

LOST OR STOLEN?

Just as we are going to press, information has leaked out that Senate Bill No. 451, creating a State Department of Health, did not become a law, as was thought or expected, although the bill passed both branches of the legislature. It appears that the bill was either lost or stolen after it reached the Senate from the House, and, strangely, no record can be found of it. In the opinion of those

who have been intimately connected with and interested in the passage of this measure, either high-handed fraud or criminal carelessness attaches to those whose duty it was to see that the bill ultimately reached the governor in proper shape for his signature. Was the bill lost or stolen? A detailed history of this unfortunate affair will appear in the next issue of The Journal.

MEDICAL COLLEGE MERGER.

Realizing the necessity of a stronger and better medical college in Arkansas, the University of Arkansas, Medical Department, and the College of Physicians and Surgeons have for some time discussed the advisability of merging the two colleges. Through the assistance of the trustees of the University of Arkansas and the Arkansas Medical Society this merger was effected and the new college taken over by the state and made a part of the University of Arkansas.

At a recent meeting of the faculty Dr. Jas. H. Lenow was elected Dean and Dr. J. P. Runyan Vice-Dean. Drs. Lenow and Runyan are men of more than local reputation. Their experience, ability and popularity with the profession unquestionably bespeak success for the institution. Since their election they have been quite busily engaged in remodeling the college buildings and equipping laboratories for the coming session. They expect a very large class, and will no doubt have every convenience possible for the accommodation of the students.

The standard of requirements will be governed by the rules of the American Medical College Association. The college will receive the hearty support of the Arkansas Medical Society and the entire profession of the state. It will be so conducted as to demand the respect and support of the entire state. It will no longer be necessary for the young men of our state to go elsewhere for their medical education.

PHARMACY DEPARTMENT.

The College of Pharmacy formerly conducted by the College of Physicians and Surgeons was also taken over by the University of Arkansas, and will be conducted under the management of the Medical Department. Dr. J. F. Dowdy was appointed Dean and Dr. Jesse D. Hodges Secretary. The stand-

ard of the Pharmacy Department will be equivalent to that of the Medical Department.

REPORT OF DELEGATE TO AMERICAN MEDICAL ASSOCIATION.

Joseph T. Clegg, M. D.

Those who failed to attend the meeting of the American Medical Association, at Los Angeles, lost one of the most enjoyable opportunities of their lives. The meeting was in every way a success. The attendance was large, and many of the papers read before the different sections were exceptionally good. The writer, however, being a member of the House of Delegates, was denied the privilege of hearing many of them. There was nothing of great moment to the profession brought before the House of Delegates, except the question defining "who are members of the American Medical Association." This question will be brought before the different State societies during the coming year.

Under the present constitution, every member of a recognized county society is entitled to become a member of the American Medical Association, yet there is no provision for the collection of dues or revenues of any kind from any member, only by subscription to the Journal. So far this has created a sufficient revenue, and even a good round surplus; but the large majority of the members of the component societies do not take the Journal, and consequently do not get any benefit out of the organization, yet they vote primarily in the government of the Association.

It is true that it is necessary to be a subscriber to the Journal to be eligible as a delegate to the American Medical Association. But they who elect him—that is, primarily the members of the county societies—are not subscribers to the Journal, which creates the anomaly of the individuals governing a body to which they do not pay any revenue. There will be many solutions offered for this difficulty, almost as many as there will be writers and speakers on the subject, so I might as well offer mine now: That is for the American Medical Association to require dues, to be paid, if necessary, from every component

State society according to number of members, of sufficient amount per capita to defray the necessary expenses of the Association government proper. Then to declare a dividend of all surplus funds derived from any sources whatsoever, whether from the publication of the Journal, dues or otherwise, and prorate it to the different State societies per capita. This plan would be virtually making each State society a stockholder in the Journal. The expenses of the Association being assured by the State societies, there would be no necessity of storing up such immense surplus as the Association is now doing. At present there is absolutely no other source of revenue to the American Medical Association but that derived from the Journal. Failure of the Journal from bad management, bad investments, misappropriations of funds or any other calamity, the American Medical Association would topple like a mass of uncemented brick in an earthquake. On the other hand, if each State had a financial interest in the Journal it could hardly ever fail, but would continue as at present, a source of revenue that would revert to the component societies. This plan would make every member of the county societies in the United States not only a virtual member, but an actual member of the American Medical Association, and would encourage him to become a subscriber to the Journal.

Understand, in writing this, I am not expressing any one's ideas but my own, and until I am convinced that some other plan is better I will continue to advocate this. This vital question has been referred to the component State societies for action during the coming year, and must be disposed of sooner or later. But more of this in another communication.

We had a most delightful trip. Leaving Kansas City on the Santa Fe, stopping one day at Grand Canyon, Arizona, arriving in Los Angeles on time, and finding our baggage in our room at the Alexandria Hotel, we were prepared to enjoy the meeting. Los Angeles indeed knows how to entertain, and she did it royally. A fish barbecue at Catalina, a Spanish luncheon and barbecue in Busche Sunken Garden at Pasadena, and a trip to Long Beach and San Pedro were only a part of the good things that they gave us.

After Los Angeles we made our way up the Pacific coast into Canada, returning by the Canadian Railway, making short stops at Santa Barbara, San Francisco, Shasta Springs, Portland, Tacoma, Seattle, Victoria, Vancouver, Glacier, Field, Laggan, Banff and Minneapolis. In San Francisco we were given a luncheon at Wine Haven by the California Wine Association. It is unfortunate that our own State does not develop its wine possibilities. Arkansas could, if it only would, grow enough grapes and make enough wine not only to displace all the mean whiskey drunk, but to pay the indebtedness of the State.

At Portland we were entertained by the Commercial Club. At Tacoma and Seattle, by local physicians. Our old friend and fellow-townsmen, Dr. Canfield, is in Seattle, and has a nice office overlooking the sound and the snow-topped Olympics beyond. He seems to be doing well.

Traveling in our party were Dr. and Mrs. A. J. Vance of Harrison, Ray Fehlert and nephew of St. Louis, Dr. Dora Wilson of Kansas City, Dr. and Mrs. Gore of Marshall, Mo., Dr. and Mrs. Williams of Iowa, Dr. Van Worden of Des Moines, Iowa, and our genial leader with his estimable lady, Dr. and Mrs. Charles Wood Fassett, editor of the Medical Herald, of St. Joseph, Mo.

Among the interesting and charming people we met on the trip were: Dr. Welsh of Baltimore, our retiring president; Dr. Lillianthall and his delightful son and daughter, of New York; Dr. Rosalie Morton of New York, whom I am sure did her part to make the trip enjoyable. Drs. Welsh and Morton left us at Victoria and went to Alaska. We left Dr. Lillianthall enjoying the beauties of Lake Louise.

I cannot close this communication without speaking a good word for the Santa Fe, Southern Pacific and Canadian Pacific railways. They were all accommodating, the Santa Fe, in particular, going to extra trouble to make the trip over its line pleasant.

Among the hotels I want to mention favorably are the Alexandria at Los Angeles and the Granada in San Francisco. Our Arkansas friends visiting the exposition in 1915 cannot do better than to look up this quiet but up-to-date hotel. And the Bowers at Portland, the Seattle at Seattle, the Empress at Victoria, as well as the others along

the line of the Canadian Pacific Railway, under the management of that road.

Department of Syphilology.

THE PRESENT STATUS OF SALVARSAN.

It is rather difficult to designate the exact position which "606" holds in the confidence of the medical profession as a whole. The reason for this is the fact that doctors are divided into two distinct and separate classes as to their opinions on this drug. A considerable number oppose the use of salvarsan, claiming that it is not at all a specific against syphilis and that it is a very dangerous agent.

Others hold with equal earnestness and far greater enthusiasm that "606" is a specific against syphilis and that it is absolutely harmless to all patients having sound kidneys and good optic nerves. They claim that it is as much a specific against syphilis as quinine is against malaria, but that as no one expects one dose of quinine to destroy all malarial plasmodia in a given case, it is not surprising that one dose of salvarsan does not eradicate syphilis in every instance.

It is a noteworthy fact that the physicians who are opposing the use of "606" have acquired their opinions without any actual personal experience with the drug, while those who are ardent supporters of its use have become so by giving many doses and getting results. Another drawback to its more general popularity is the amount of trouble necessarily incurred in giving an intravenous injection, for very few physicians have, within the past few months, given this drug subcutaneously or intramuscularly, these methods being more or less barbarous, as well as therapeutically much less satisfactory than the intravenous. Give .6 gm. of salvarsan intravenously to a patient having 6,000 cc. of blood, and almost at once that patient's blood becomes a 1-to-10,000 solution of the drug. The strength of the solution of salvarsan in the blood of a patient receiving a dose intramuscularly is problematical, while the subcutaneous doses are frequently walled off and not absorbed at all.

The physiological effects of an intravenous dose of "606" on a person in good health are surprising by their absence. If the subject is free from the diseases affected by salvar-

san, the physiological effects consist of a few bowel movements; nothing more. The temperature will rise to 99 or 99½ for a few hours, but this is not noticeable to the patient, and the same will follow an intravenous of warm normal salt solution.

But the picture is entirely different if the patient has syphilis. In a secondary case of some activity it is presumed that numerous spirochetæ are killed within a short time after the intravenous injection. From the killed germs is supposedly released a quantity of endotoxins, and one would expect the same results as seen in a case of malaria when a crop of plasmodia mature and release the poison causing a malarial paroxysm. And that is just what does occur. This paroxysm, frequently ushered in by a chill which is followed by the usual fever, as in a malarial paroxysm, is all over in from four to six hours in this type of cases (early secondary), and the patient is up and about the next day, feeling very well.

The picture is again different in a tertiary case. Here the chill is generally omitted and the fever runs lower and longer. In many tertiary cases of very long standing the paroxysm is delayed in onset, requiring from four to twelve hours to acquire a temperature of 100 to 101 degrees. This may be from the slow and irregular killing of spirochetæ which are embedded in the tissues having poor blood supply.

When we consider the fact that this so-called reaction, or paroxysm, does not occur from "606," but from the endotoxins released by the killing of the disease-producing organisms, and when it further becomes apparent that the same paroxysm occurs in a case of pellagra after an intravenous injection of salvarsan, as if it were syphilis, there is much opportunity offered for surmise as to the shape of a pellagra germ. As syphilis and yaws, another disease treated with "606," are each caused by a member of the spirillum family, it seems probable that pellagra has also a corkscrew-shaped germ.

How much salvarsan should be given a patient with syphilis? Certainly not the same dose to all, as is customary at present. We give the .6 gm., or 9 grains, to a 90-pound patient or to a 250-pound patient. In one the blood becomes a solution of the strength of 1 to 6,000, and in the other the solution is 1 to 15,000, with presumably much less germ-

icidal power. As the 90-pound patient experiences no bad result from 9 grains of salvarsan, it is perfectly reasonable to expect the larger patients to require 20 grains, or at least two doses at once, as put up at present.

How many doses should be given and how often repeated? Future experience will tell. There may be a cycle of development for the spirochetæ and a better killing time to repeat doses, as in malaria. At present I am giving most cases, especially all in the early secondary stage, two doses—one when the patient arrives, followed by mercury (pushed) for from three to six weeks, and then the second dose of salvarsan is given. In about half of the early cases there is no "reaction" after the second dose, indicating a possible absence of spirochetæ; in other words, a cure. In the other cases the reaction is modified and much less severe after the second than after the first.

Is mercury necessary? Probably not; it can do no harm. But to speak personally, if I should ever be so unfortunate as to acquire a syphilitic infection I would certainly take an intravenous injection of salvarsan every ten days until no reaction followed a dose, leaving the mercury alone. But we do not dare be so radical with our patients, and it will probably be some years before that plan is adopted in general practice.

E. H. MARTIN, M. D.

Department of Eye, Ear, Nose and Throat.

MOUTH BREATHING.

If half the energy that is spent by preachers, teachers and physicians on education and advice in regard to alcohol and tobacco was spent in educating the parents and guardians of our infants and children of the harmful results of mouth breathing, due to adenoids, etc., we would do more real good in one year than our so-called Scientific Temperance Propaganda for Reforms does in two. Who of us physicians that observe closely, do not every day see children with their mouths continually open, due to an enlarged adenoid, deflected septum, swollen turbinates, and maybe hypertrophied tonsils, parading the streets, filling our churches and schools?

The respiratory tract is composed of the nose, pharynx, larynx, trachea, etc., and when a child ceases to breathe through these channels he ceases to be a normal individual. It ought to be as unnatural to see a human being going around breathing through the mouth as it would be to see a horse or cow with its mouth open, inhaling and exhaling air. But the mother tells us it is habit. True it is that children are very susceptible to habits, especially so since they are by nature imitative beings. A child's habits, *per se*, will not continue during sleeping hours unless there is a cause other than imitation for that habit. And the moment we find a cause, it ceases to be a habit. The cause of this condition in children we know to be some obstruction to breathing, and most often it is adenoids. We, as physicians, should make every effort to help educate the instructors of the young in our state as regards to mouth breathing—its cause, effect and treatment—and should use our influence to see that in each county a medical inspector is appointed whose duty it should be to give lectures at county institutes and teachers' meetings in regard to medical subjects that would be beneficial to teachers and pupils. When possible, schools should be visited and inspections made. Teachers, as a class, are very eager listeners, and I have found them only too glad to help take up this work. Until the above time comes, we can instruct the father, mother, or some responsible member of the family as to the baneful influence and results of mouth breathing, if left alone, and what can be done if treated.

We should always bear in mind, and never cease to impress on parents, that the great majority of ear troubles are caused by adenoids and bad tonsils. Every child with a discharging ear, or deafness, is entitled to a thorough examination for adenoids and diseased tonsils, and if hypertrophied, is entitled to their removal. Never are we justifiable, at this age of medical knowledge, in telling parents that the child will outgrow his condition, unless we first make a thorough examination. We have, today, too many children growing from bad to worse under the fond hope of a desirous mother that age will rectify it all.

We must remember that adenoids, like tonsils, are physiological organs, whose purpose in the economy of the system, like the

appendix, is *incognito*, and only when they cause obstruction, or are diseased, do we call them pathological organs, and insist on their removal.

Do adenoids recur? They do not have as great a tendency to recur as they have to keep coming. Sometimes they are embedded deeply within the mucous membrane, and in removing them we cut off the top and they grow out again.

I prefer to use a curette with a decided curve and place my curette well against the posterior end of the septum before scraping; then, with a backward and downward cut with the curette, remove the growth. I always introduce my finger afterward and break up any adhesions that may have formed in the sides of the naso-pharynx and break down any adenoid tissue that may be located there. Always clean out thoroughly the opening of the tube and Rosenmuller fossa. Then, if I have left any adenoid tissue, I reintroduce my curette, or a curette with a different curve, and remove it. Oftentimes I get fairly good-sized pieces that I did not get the first time.

Another thing, the obstruction in the naso-pharynx of these children has been such that it has changed the contour of their mouth and face, and even after the adenoids are removed their speech is not good, and the breathing not what it should be. In these cases we generally find a high arched, narrow palate; and if permanent teeth have begun to appear, a ragged, or maybe, a double row of teeth. These are cases for the dentist. I have seen the contour of these faces improved so much in one year by an efficient dentist that I would hardly know them the next year. Coincident with this, we will see a change in the voice. Every child with crooked teeth should have them straightened, not alone for the cosmetic effect, but for the effect on his general health, the improvement in his respiration, phonation and mastication.

ROBERT CALDWELL, M. D.

KILLIAN'S CONTRIBUTIONS TO DISEASES OF THE NOSE AND THROAT.

Until Killian perfected the method for the submucous resection of the nasal septum, there was no operation so perfectly satisfactory for deflections of the septum. In fact,

the submucous resection operation has taken the place of all other operations in deflection in the hands of very many operators.

The advantages of the submucous resection are many. The patient is not confined to the bed but a day or two, and in the average case is well at the end of a week. There is no destruction of the mucous membrane of the nose, and this cannot be said of any other operation for the correction of these deformities.

Killian's radical operation for the cure of diseases of the accessory sinuses of the nose marked another great step in nasal surgery. His discovery that the frontal, ethmoid and maxillary sinuses on the same side were very frequently involved together, made it possible to cure many of these cases by his most radical operation; and while his most radical operations leave little deformity, result often in complete cure of the diseases of these sinuses which were unknown before the invention of his operations, yet this operation is not being done so much as it formerly was. Many cases, however, can be cured by this operation alone.

Perhaps his greatest work was in perfecting a reasonably safe and simple method of introducing straight tubes into the trachea and bronchi, lighting these tubes with a headlight, and successfully removing foreign bodies from these passages. What he did in the bronchi he did in the esophagus.

Cases of foreign bodies in the upper air passages had a mortality of 25 per cent until Killian's method was put into general use. Now the mortality is 5 per cent, and even less. Many an unfortunate little child living today owes its life to this method.

Killian is a plain, hard working, unassuming man, a little past middle age, and lives in the small city of Frieberg, in southern Germany, a city noted for its famous physicians. Frieberg is also the home of Axenfeld, the oculist, and Jacobi, the dermatologist.

R. H. T. MANN, M. D.

Communications.

The following letter from Dr. C. R. Shinnault to Dr. Runyan will be read with interest by the readers of *The Journal*, every one of whom wishes him a pleasant trip abroad:

"On Board S. S. 'Romanic.'"

"Dear Runyan—Owing to a prolonged headwind which delayed us about four hours, we did not land at Algiers until 7 p. m.

"Gibraltar is quite an interesting place, but not so attractive as Madeira or the Azores. The first two places are all we could expect of the 'dream lands.' Shades galore and flower gardens at every turn, well kept and green; quite the reverse in Gibraltar. While there was a stiff breeze, the sun peppered down unobstructed by shade trees, and a white, concrete-like coating on that part of Mother Earth caused a reflection of the sun's rays, and as a result, one may see a representation of all nations looking squint-eyed.

"While it is on my mind, I might tell you how I got around the beggars, from the small boy up. When they approached me I looked stupidly at them and pointed to my mouth and ears, after which they politely bowed away, and if there were one or more confederates approaching, they gave them to understand that they should lose no time on me, that I was deaf and dumb. Our daughter is even catching on. This morning when I called to her to stop doing a certain thing, she pretended she did not hear me; after repeated calls to her, she spoke up and said, 'I don't speak English.' Pretty good for a three-year-old Westerner, wasn't it?

"Gibraltar, and a little Spanish town which is a continuation of the city, with about fifty thousand people in each and covering a space about the size of Argenta, are anything but attractive, except 'The Rock' and the fort therein. The whole thing goes to show that what suits one person may not always suit another, and it is this that is necessary to make a world.

"My party blessed me out, in the Spanish town, because I got lost from them and detained the hacks about fifteen minutes. We had gotten out at the gates to enter the little Spanish town. Great Britain and Spain have no reciprocity treaty permitting vehicles to cross over, and I was bringing up the rear. As we were marching up the narrow streets, I hollered to my wife that I was going to step into a place and find out where the bull ring was, and, to my surprise, when I got in there, I found it was a saloon; and, besides, the fellow could not inform me, as he could not speak English. I did make him under-

stand what Madeira wine was. I took a glass and pitched him out an American half-dollar. He said it was no good. I could not return the wine, and had no foreign money except a few Portuguese coins, which I failed to get rid of before leaving Madeira, as no one on ship would accept them, so I was trying to convince him the half-dollar was good. After a while another Spaniard came in who could speak a little English, and after so long a time persuaded the other fellow it was good. He gave me some change, and as I left the place I could hear him throwing the half-dollar on the counter testing its ringing qualities. I then tried to trail my party. I could not inquire, for all I met were a lazy-looking lot of squint-eyed Spanish peasants. I led off in the direction in which they were headed when I went to get the information about the bull ring. A block or so convinced me that they had gone some other way, and then I began to wander aimlessly in space and Spain. I kept my bearings, and after taking in a few points of interest and trying to buy a peculiar-looking pipe from a Spaniard, and also trying to get rid of the other Spanish coins in sampling another brand of wine in another place, I turned toward our carriages and met our conductor, Dr. Waldo, who was looking for me. We had not then taken in Gibraltar, so they 'blessed' me out, and I did not feel like going into details explaining the *etiology* of my detention. We then sped back to Gibraltar, now and then lifting our feet off the bottom of the carriage when they would get too hot. We saw forts and port-holes apparently on every side of the Rock of Gibraltar, the wireless on top, the narrow streets, many little two-by-four store spaces at its foot, and apparently every nation represented. A typical African dressed *a la America*, who was all absorbed in relating something to an apparently white gentleman, was pointed out to me as being one of the leading M. D.'s in the town.

"This trip so far has been interesting. To me more good comes from making me better satisfied with my own country. Of course I expect it to be better and more alluring in some parts of the old country, but I have seen enough to fix my clock, should I ever have contemplated spending several years away from American soil. I might say before leaving this subject, that passing through the straits and having twenty-four hours'

view up to this time of the African coast, and about the same of Spain, is lovely to behold and comforting to one's senses.

"We have a most congenial crowd of 235 passengers on board. On upper deck, concerts, lectures, dances and shuffle-board are the principal amusements. I have indulged temperately in all and feel very much better physically and morally.

"The two Josephines, who are quite well, join me in best wishes for you and yours and the office force.

"Yours sincerely,

"C. R. SHINAULT."

State Medical Board Notes.

RESOLUTION ON DR. NORWOOD RETIRING FROM EXAMINING BOARD.

Dr. M. L. Norwood, of Lockesburg, who has served the full time prescribed by law on the State Medical Board of the Arkansas Medical Society, retired after eight years' continuous service, Dr. F. T. Isabel, of Horatio, being appointed by the governor for the district.

In recognition of the valuable services rendered by Dr. Norwood, the following resolution was unanimously passed by the board at the last semiannual meeting held in Little Rock in May:

To the President and Members of the State Medical Board of the Arkansas Medical Society:

GENTLEMEN—We, the undersigned committee, appointed to suitably express the feelings of this board relative to the retirement of Dr. M. L. Norwood as a member of this body, beg to submit the following:

Resolved, That in the severance of the connection of Dr. Norwood from the State Medical Board of the Arkansas Medical Society, the board feels that it loses one of its most valued members. The appointive power wisely saw fit to appoint Dr. Norwood as one of the original members of this board, and by his long experience, his energy, his zeal and conscientious discharge of the duties devolving upon him, he has contributed largely to its success.

As a member his efforts were ever exerted in the promotion of harmony and efficiency, while, as president, his acts and rulings were

just and fair to all concerned. That he was twice appointed a member of this board and by its members twice elected their president, strikingly attests his ability and the high regard and esteem in which he was held.

It is the heart-felt wish of the entire board that every possible success may be his in the future, and that the lines of his life may be cast in pleasant places. Be it further

Resolved, That a copy of this resolution be mailed to Dr. Norwood, a copy sent to *The Journal of the Arkansas Medical Society*, and that same be spread upon the records of this board.

Respectfully submitted,

M. FINK, M. D.,

F. B. YOUNG, M. D.,

Committee

MEETING OF STATE MEDICAL BOARD.

The State Medical Board met in regular semi-annual session in Little Rock, June 10.

The case of J. R. Mayhew, of Texarkana, was taken up and his license revoked for publicly advertising to cure chronic and incurable diseases.

The Board ruled that in the future all applicants for examination who have been in active practice for five years be allowed 1 per cent on all grades for each year of such active practice.

The following is a report of the examination for license to practice medicine:

Number admitted for examination.....	88
White	80
Colored	8
Number of successful applicants.....	72
Number of unsuccessful applicants.....	16

Schools Represented.

College of P. & S., Little Rock.....	20
University of Arkansas.....	23
Atlanta College of P. & S.....	1
Illinois Medical College.....	1
College of P. & S., Chicago, Ill.....	1
Bennett Medical College.....	1
University of Louisville.....	2
Trlane University of Louisiana.....	7
Baltimore Medical College.....	1
Barnes Medical College.....	2
Reaumont Hospital Medical College.....	1
Kansas City Medical College.....	1
Vanderbilt University.....	4
Meharry Medical College.....	7
Memphis Hospital Medical College.....	10
University of Tennessee.....	3
University of Virginia.....	1
St. Louis College of P. & S.....	2

ANNUAL INSPECTION OF MEDICAL COLLEGES.

This board will make an annual inspection of each medical college in the State of Arkansas, and such additional inspections, without previous warning to the faculty, as the board may from time to time deem necessary.

Reciprocating boards are expected to pursue a similar policy concerning medical colleges within their jurisdiction.

SCHEDULE OF MINIMUM REQUIREMENTS PRESCRIBED FOR MEDICAL COLLEGES.

All medical colleges in this State, in order to attain good standing with this board, must conform to the following schedule of requirements:

CONDITIONS FOR ADMISSION OF STUDENTS TO LECTURE COURSE.

Section 1. A creditable certificate of good moral character, signed by at least two physicians in good standing in the State from which applicant comes.

Sec. 2. Beginning with the session of 1911 and 1912, an entrance certificate as issued by this board must be required of all applicants for matriculation.

Sec. 3. These entrance certificates will be issued upon (a) acceptable credentials; (b) the successful passing of an examination before the State Superintendent of Public Instruction or his authorized agent.

ACCEPTABLE CREDENTIALS.

Sec. 4. (a) A diploma from a reputable university or college granting the degree of A. B., B. S., or an equivalent degree.

(b) A diploma or certificate of graduation from an accredited four-year high school or college whose course of instruction equals that required for entrance by the University of Arkansas.

(c) Evidence of having passed a matriculation examination of a recognized or scientific college.

(d) A certificate of successful examination equivalent to the matriculation examination by the faculty of any reputable university or college.

(e) A certificate of having passed successful examination before the State Superintendent of Public Instruction or his authorized agent.

EXAMINATION FOR MATRICULATION.

Section 5. All applicants for matriculation in a medical college in this State who are not in possession of acceptable credentials will be required to undergo an entrance examination.

These examinations will be conducted in the city of Little Rock by the State Superintendent of Public Instruction or his authorized agent.

Examinations will be conducted according to rules governing the examination for admission to the University of Arkansas. The examination papers will be graded by the authority who prepares the questions, or by a committee appointed by him. Applicants will be required to make a general average of 70 per cent in this examination. Applicants for examination are requested to refrain from indicating in any way to what medical college they desire admission.

After papers have been graded as above mentioned, they will be forwarded to the secretary of the State Medical Board, who will, on receipt of same, issue to those whose examination has been satisfactory an entrance certificate permitting them to enter any medical college in the State of Arkansas.

Sec. 6. The secretary of this board will keep a record of applicants to whom entrance certificates have been issued.

NUMBER OF CREDITS REQUIRED.

Sec. 7. For full admission to medical college credit for thirteen units will be required. Seven of these must be from prescribed subjects, but the remaining six may be taken in any of the elective subjects named below.

Sec. 8. There may be allowed three conditional units from the elective group, but these conditional units must be removed by the sophomore year, and, as an evidence that these conditional units have been removed, the applicant must submit to a second examination before the Superintendent of Public Instruction or his authorized agent.

RESPECTIVE VALUES OF REQUIRED AND ELECTIVE STUDIES.

Sec. 9. Required—English, 3; Algebra, 2; plane geometry, 1; United States History, 1.

Elective—Latin, 4; Greek, 3-4; French, 3-4; German, 3-4; English, 1 in addition to required; Ancient History, 1; Modern History, 1; English History, $\frac{1}{2}$ -1; Physical Geography, $\frac{1}{2}$ -1; Physiology, $\frac{1}{2}$ -1; Botany,

$\frac{1}{2}$ -1; Zoology, $\frac{1}{2}$ -1; Biology, 1; Chemistry, 1; Physics, 1; Civil Government, $\frac{1}{2}$; Agriculture, $\frac{1}{2}$ -1; Elementary Pedagogy, $\frac{1}{2}$ -1; Elementary Psychology, $\frac{1}{2}$; Manual Training, $\frac{1}{2}$.

NUMBER OF REQUIRED COURSES.

Sec. 10. No college will be regarded as in good standing with this board that does not require as a condition for graduation not less than four courses of lectures of not less than thirty teaching weeks each, no two of which shall begin or end in the same calendar year.

Sec. 11. Regular attendance during the entire lecture courses shall be required, allowance being made only for absence occasioned by the student's sickness, and such absence not to exceed twenty per cent of the course.

Sec. 12. Frequent examination shall be conducted by the lecturer or professor.

Sec. 13. Each student must dissect one lateral half of a cadaver.

Sec. 14. The attendance upon at least two terms of clinical and hospital instruction, and practical work in well-equipped laboratory.

FACILITIES FOR INSTRUCTION.

Sec. 15. The college must show that it has a sufficient and competent corps of instructors and the necessary facilities for teaching by laboratories, clinics and hospital, and for dissections.

Sec. 16. No medical college issuing a catalog or announcement in which are contained misrepresentations respecting its teaching facilities or course of instruction, or false misrepresentations as to the number of students matriculated or in attendance will be regarded as in good standing.

Sec. 17. The standing of all medical colleges will be passed upon each year by a Committee on Schools and Reciprocity. The standing of colleges outside of the State of Arkansas will be determined upon the findings of that board in whose jurisdiction they are located, provided such board makes an annual inspection of the same and has reciprocal relations with this State, but under all circumstances this board reserves the right to inspect and investigate any college outside of the State and pass independently upon the standing of such college, or to cite evidence why the board in whose jurisdiction the said college is located should revise its

findings. This privilege is likewise extended to other State boards having reciprocal relations with this board.

STATE BOARD OF HEALTH.

Governor Geo. W. Donaghey recently appointed on the State Board of Health the following physicians: Drs. J. P. Runyan, Little Rock; J. G. Eberle, Fort Smith; O. O. Williamson, Marianna; T. J. Stout, Brinkley; R. L. Smith, Russellville; Charles Dake, Hot Springs.

At a recent meeting of the Board Dr. J. P. Runyan was elected President and Dr. Morgan Smith, Secretary.

Personal Mention.

TEXARKANA.

Dr. C. A. Smith is in New York City with his son, who is undergoing treatment.

Dr. G. C. Abell is spending the summer at northern and eastern clinics.

Dr. Preston Hunt expects to be out of the city for three or six weeks getting a much-needed rest.

Dr. John R. Dale expects to spend the month of August with his family in the country at Caddo Gap.

Dr. Ferrell, who has served two years' internship in the Cotton Belt Hospital at this place, is opening an office in Tyler, Tex.

Dr. P. R. Watkins, of Mena, is home again after spending several months in Vanderbilt University.

R. H. T. M.

OSCEOLA.

Dr. Z. H. McKinney, formerly of Huttig, Ark., has located at Marie, Mississippi County, to succeed Dr. J. D. Harbert, deceased.

Dr. W. H. Owens, recently from Memphis, has located at Joiner, Mississippi County.

Dr. Martin Mehrle, of Bassett, is preparing to leave that place and will be succeeded by Dr. Phillips.

A splendid location at Osceola for a young dentist. Have him investigate.

Dr. G. W. Parker, formerly of Blytheville, has located at Cape Girardeau, Mo.

Dr. A. Davis, from Texico, New Mexico, has located at Armorel, Mississippi County.

O. HOWTON, *Secretary-Treasurer*.

County Societies.

UNION COUNTY.—The Union County Medical Society met in regular session on July 3, at 10:30 a. m., in Dr. L. L. Purifoy's office. Called to order by the president, Dr. S. E. Thompson.

Minutes of the last two meetings read and approved.

The case of Dr. J. M. Sheppard was taken up again and his name dropped from membership for failure to comply with the by-laws of the society. The secretary was instructed to notify Dr. Sheppard of the action of the society.

A motion by the secretary that he should have some cards printed with space left to be filled by the members, giving name, age, place of birth, literary education, medical education, graduation, etc., was adopted. These cards are to be filled out by the members and kept on file in secretary's office.

The secretary was ordered to write the State secretary for a copy of the uniform Constitution and By-laws for Component Medical Societies.

A communication was read from Dr. H. H. Neihuss, of Little Rock, asking for transfer of membership to Pulaski County Medical Society, which was granted.

Dr. Mitchell read a very instructive paper on "Acute Suppurative Pyelonephritis."

Dr. McGraw conducted a very interesting quiz on "Typhoid Fever."

Dr. Mitchell was appointed to conduct a quiz at the next meeting, the subject being "Colitis."

The society adjourned until next regular meeting, August 7.

F. O. MAHONEY, *Secretary*.

INDEPENDENCE COUNTY.—The Independence County Medical Society met in Batesville Monday evening, July 3, with the following members present: Drs. Rodman and Rowe, of Sulphur Rock; Dr. O. L. Bone, of Cushman; Dr. L. T. Evans, of Barren Fork; Dr. J. Heyden, of Jamestown; Drs. J. W. Case, R. C. Dorr, O. J. T. Johnson and Frank A. Gray, of Batesville.

After taking supper together, the society proceeded to take up the regular program, with President Rodman in the chair,

Dr. L. T. Evans read a paper on "Puerperal Eclampsia, with the Report of a Case of Chronic Interstitial Nephritis."

Dr. O. J. T. Johnson read a paper on "Pellagra, with a Report of a Case Terminating Fatally in Three Months."

Several other cases were reported and discussed by the members.

Drs. Case and Johnston were made a Committee on Entertainment and each member donated one dollar for the entertainment at the next meeting.

Drs. Gray, Rowe and Heyden were put on the program to read papers at the next meeting.

The meeting adjourned to meet the first Monday in October. We urge every member to be present and make an effort to have every physician in the county present.

FRANK A. GRAY, M. D., *Secretary*.

WASHINGTON COUNTY.—The Washington County Medical Society met in regular session at 3 p. m. July 5, 1911, in the jury room of the courthouse at Fayetteville. The president and secretary being absent, Dr. W. B. Welch acted as president *pro tempore*, and Dr. F. B. Young as secretary. Several members were absent, attending the meeting of the American Medical Association. Among these were Dr. E. F. Ellis and W. N. Yates, of Fayetteville. Those present at the July meetings were Drs. J. S. Cannon, D. Christian, J. E. Martin, W. B. Welch, H. D. Wood, John Young and F. B. Young.

Dr. F. B. Young presented two cases of pellagra and reported four others. Discussed by all present.

Dr. J. S. Cannon read a paper on "Treatment of Puerperal Infection."

The application for membership of Dr. W. T. Tabbert, of West Fork, was read and referred to the Committee on Credentials. No further business appearing, the society adjourned till next quarterly meeting, first Tuesday in October.

F. B. YOUNG, *Secretary pro tem*.

MISSISSIPPI COUNTY.—The Mississippi County Medical Society met at Blytheville Tuesday, July 11, with the following members present: Dr. E. E. Craig, president, of Wilson; Dr. P. G. Noack, Bardstown; Drs. S. A. Lowry and T. F. Hudson, Luxora; Dr. A. Davis, Armorel; Drs. C. C. Stevens, W.

H. Borum and J. F. Sanders, Blytheville. Dr. W. H. Owens, of Joiner, and Dr. E. V. Hill, of Yarbrow, were present and elected to membership.

Dr. P. G. Noack read a paper on "Congestion in Malaria," with report of several cases which created much discussion.

Dr. J. F. Sanders read a paper on "The Use and Abuse of Calomel in General Practice."

It was agreed to have for the August meeting a symposium on diseases of the gastrointestinal tract, and for the September meeting a symposium on malaria.

O. HOWTON, *Secretary*.

Personals.

Drs. E. N. Davis and R. L. Saxon are visiting the clinics in Chicago and New York. They will return about the middle of September.

Dr. F. L. Proctor, formerly of Junction City, has removed to Little Rock and has his offices at Seventh and Main Streets.

Dr. H. H. Kirby was recently appointed physician to the deaf-mute and blind schools.

Dr. and Mrs. Leonidas Kirby and Dr. and Mrs. A. J. Vance of Harrison have returned from the meeting of the American Medical Association at Los Angeles.

Dr. C. W. Garrison of Fort Smith and Dr. T. D. Bradford of Cotton Plant have recently been appointed as district sanitary directors for the State Board of Health.

Dr. L. R. Ellis of Hot Springs was recently appointed a member of the Federal Registration Board of the Hot Springs reservation. The board is now composed of the following members: Drs. L. R. Ellis, Chas. Dake, E. H. Martin, Sam L. Steer and Maj. H. M. Hallock.

Among the recent visitors to Little Rock are the following physicians: T. J. Stout, Brinkley; C. W. Garrison, Fort Smith; F. T. Murphy, Brinkley; E. Jones, Harrell; T. D. Bradford, Cotton Plant; E. L. Watson, Newport; Earl Hunt, Clarksville; F. C. Robinson, Hazen; E. Kubale, Bigelow; J. P. Furgeson, Sweeden; J. B. Crofford, Benton.

Dr. Wm. R. Bathurst has recently been appointed secretary of the faculty of the

Medical Department, University of Arkansas. He was formerly professor of dermatology in the College of Physicians and Surgeons of Little Rock, and will occupy the same chair in the Medical Department, University of Arkansas. He is popularly known in the profession, and the faculty is to be congratulated for the selection of Dr. Bathurst as secretary.

We are in receipt of communications from Drs. H. E. Pearse and F. H. Skinner of Kansas City enclosing a nice advertisement for August and also one for September. They are inviting the medical profession of the Southwest to attend their clinics during the Priests of Pallas festivities, October 3 to 10.

Dr. W. Pittman of Grapevine wishes to exchange his property and practice for property in a good town or city.

Constitution and By-Laws for County Societies.

Prepared by the Committee on Organization of the American Medical Association.

CONSTITUTION.

Article I—Name and Title of the Society.

The name and title of this organization shall be the County Medical Society.

Article II—Purposes of the Society.

The purposes of this Society shall be to bring into one organization the physicians of County, so that by frequent meetings and full and frank interchange of views they may secure such intelligent unity and harmony in every phase of their labor as will elevate and make effective the opinions of the profession in all scientific, legislative, public health, material and social affairs, to the end that the profession may receive that respect and support within its own ranks and from the community to which its honorable history and great achievements entitle it; and with other county societies to form the State Medical Association, and through it, with other State Associations, to form and maintain the American Medical Association.

Article III—Eligibility.

Every legally registered physician residing and practicing in County, who is of good moral and professional standing and who does not support or practice, or claim to practice, any exclusive system of medicine, shall be eligible for membership.

Article IV—Meetings.

Regular meetings shall be held at such time and place as may be determined by the Society. Special meetings may be called by the President and shall be called on a written request of five members. A call for a special meeting shall state the object of such meeting, at which no business except that stated in the call shall be transacted.

Article V—Officers.

The officers of this Society shall consist of a President, Vice President, Secretary, Treasurer, Delegates and Board of three Censors. These officers, except the Delegates and Board of Censors, shall be elected annually. Delegates shall be elected for two years, and in accordance with the Constitution and By-laws of the State Association. One member of the Board of Censors shall be elected each year to serve for three years, provided that at the first election after the adoption of this Constitution one member of the board shall be elected for one year, one for two, and one for three years.

Article VI—Funds and Expenses.

Funds for meeting the expenses of the Society shall be raised by annual dues, special assessments and voluntary contributions. Funds may be appropriated by vote of the Society for such purposes as will promote its welfare and that of the profession.

Article VII—Charter.

The Society shall apply to the Council of the State Association for a charter at the meeting at which this Constitution and By-laws is adopted, or as soon thereafter as practicable, and the charter shall be kept by the Secretary.

Article VIII—Incorporation.

The Society shall have authority to appoint a Board of Trustees and to provide for articles of incorporation whenever it may deem this necessary.

Article IX—Amendments.

The Society may amend any article of this Constitution by a two-thirds vote of its members at any regular meeting, provided that such amendment or amendments are not in conflict with the laws and regulations of the State Association; provided, also, that such amendment shall have been read in open session at a previous regular meeting and shall have been sent by mail to each member ten days in advance of the meeting at which final action is to be taken.

BY-LAWS.

Chapter I—Membership.

Section 1. The Society shall judge of the qualification of its members, but as it is the only door to the State Medical Association and to the American Medical Association for physicians within its jurisdiction, every reputable and legally qualified physician of County who does not support, or practice, or claim to practice, sectarian medicine, shall be eligible to membership.

Sec. 2. A candidate for membership shall make application in writing and shall state his age, his college and date of graduation, the place in which he has practiced, and the date of registration in this State. The application must be accompanied by the admission fee and must be endorsed by two members of this Society. It shall be referred to the Board of Censors, who shall inquire into the standing of the applicant, assure themselves that he or she is duly registered according to the laws of the State, and report at the next regular meeting of this Society. Election shall be by ballot, and two-thirds of the votes of the members present and voting shall be necessary to elect. The application shall be returned to the

Secretary, who shall file it for future reference. Applications for membership from rejected candidates shall not be received within six months of such rejection.

Sec. 3. A physician accompanying his application with a transfer card from another component county society of this or any State within 60 days of the issuance of said card shall be admitted without fee on a majority vote of the members present, and without the application being referred to the Board of Censors. Such application may be acted on at the meeting at which it is presented on the vote of three-fourths of the members present, otherwise it shall lie over until the next regular meeting. No annual dues for the current year shall be charged against such members, provided the same have been paid to the Society from which the applicant comes.

Sec. 4. A physician residing in an immediately adjoining county may become a member of this Society in like manner and on the same terms as a physician living in this county, on permission of the county society of the county in which the applicant lives.

Sec. 5. A member in good standing who is free from all indebtedness to this Society, and against whom no charges are pending, wishing to withdraw, shall be granted a transfer card. This card shall state the date the member associated himself with this Society, the date of issuance of the card, and shall be signed by the President and Secretary. It shall be accompanied with a copy of the application presented at the time the member joined the Society, for information to the Society to which the member desires to attach himself.

Sec. 6. All members shall be equally privileged to attend all meetings and take part in all proceedings, and shall be eligible to any office or honor within the gift of the Society so long as they conform to this Constitution and By-laws, including the payment of dues. A member who is under sentence of suspension or expulsion shall not be permitted to take part in any of the proceedings, or be eligible to any office until relieved of such disability. And, provided further, that none of the privileges of membership shall be extended to any person not a member of this Society except on a majority vote of the Society in regular meeting.

Sec. 7. A member who is guilty of a criminal offense or of gross misconduct either as a physician or as a citizen, or who violates any of the provisions of this Constitution and By-laws, shall be liable to censure, suspension or expulsion. Charges against a member must be made in writing and be delivered to the Secretary, who shall immediately furnish a copy to the accused and to the chairman of the Board of Censors. The Board of Censors shall investigate the charges on their merits, but no action shall be taken by the Board within ten days of the presentation of the charges to the accused, nor before giving the accused and accusers ample opportunity to be heard. The board shall report (1) that the charges are not sustained; or (2) that the charges are sustained and that the accused be (a), censured; (b), suspended for a definite time, or (c), expelled. Censure or suspension shall require a two-thirds vote of the members present and voting, and a three-fourths vote of those present and voting shall be required to expel a member. No action shall be taken by the Society in such cases until at least six weeks have elapsed since the filing of the

charges. A member suspended for a definite time shall be reinstated at the expiration of the time.

Sec. 8. Kindly efforts in the interest of peace, conciliation or reformation, so far as possible and expedient, shall precede the filing of formal charges affecting the character or standing of a member, and the accused shall have opportunity to be heard in his own defense in all trials and proceedings of this nature.

Sec. 9. Members expelled from this Society for any cause shall be eligible for membership after one year from date of expulsion and on the same terms and in like manner as original applicants.

Chapter II—Powers and Duties.

Section 1. This Society shall have general direction of the affairs of the medical profession of the county, and its influence shall be constantly exerted to better the scientific, material and social condition of every physician within its jurisdiction. Systematic efforts shall be made by each member, and by the Society as a whole, to increase the membership until it embraces every reputable physician in the county.

Sec. 2. A meeting shall be held at p. m. on the in each month (or oftener). members shall constitute a quorum. The officers and committee on program shall profit by experience and by example of other similar societies, and strive to arrange for the most attractive and successful proceedings for each meeting. Crisp papers and discussions and reports of cases shall be arranged for and encouraged, and tedious and profitless proceedings and discussions shall be avoided as far as practicable.

Sec. 3. Agreements and schedules of fees shall not be made by this Society, but at least one meeting during each year shall be set apart for a discussion of the business affairs of the profession of the county, with the view of adopting the best methods for the guidance of all. In all proper ways the public shall be taught that business methods and prompt collections are essential to the equipment of the modern physician and surgeon, and that it suffers even more than the profession when this is not recognized.

Sec. 4. This Society shall endeavor to educate its members to the belief that the physician should be a leader in his community, in character, in learning, in dignified and manly bearing, and in courteous and open treatment of his brother physicians, to the end that the profession may occupy that place in its own and the public estimation to which it is entitled.

Chapter III—Officers.

Section 1. The officers of the Society shall be elected at the December meeting in each year, which shall be known as the annual meeting. Nominations shall be made by informal ballot, and all elections shall be by ballot. The vote of a majority of all the members present shall be necessary to an election.

Sec. 2. The President shall preside at the meetings of the Society, and perform such other duties as custom and parliamentary usage may require. He shall be the real head of the profession in the county during the year, and it shall be his pride and ambition to leave it in better condition as regards both scientific attainments and harmony than at the beginning of his term of office.

Sec. 3. The Vice President shall assist the President in the performance of his duties, shall preside in his absence, and on his death, resignation or removal from the county, shall succeed to the presidency.

Sec. 4. The Secretary shall record the minutes of the meetings and receive and care for all records and papers belonging to the Society, including its charter. He shall notify each member of the Society as to the time and place of each meeting, and, whenever possible, give the program for the meeting. He shall keep account of and promptly turn over to the Treasurer all funds of the Society which may come into his hands. He shall make and keep a list of the members of this Society in good standing, noting of each his correct name, address, place and date of graduation, and the date of the certificate entitling him to practice medicine in this State; and in a separate list he shall note the same facts in regard to each legally qualified physician in this county not a member of this Society. It shall be his duty to send a copy of such lists, on blank forms furnished him for that purpose, to the Secretary of the State Association at such time as may be designated by the State Association. In making such lists he shall endeavor to account for each physician who has moved into or out of the county during the year, stating, when possible, both his present and past address. At the same time, and with his report of such lists of members and physicians, he shall transmit to the State Association his order on the Treasurer for the annual dues of the Society.

Sec. 5. The Treasurer shall receive all dues and money belonging to the Society from the hands of the Secretary or members, and shall pay out the same only on the written order of the President, countersigned by the Secretary.

Sec. 6. The Delegates shall attend and faithfully represent the members of this Society and the profession of this county in the House of Delegates of the State Association, and shall make a report of the proceedings of that body to this Society at the earliest opportunity.

Chapter IV—Committees.

Section 1. There shall be a Board of Censors as provided in the Constitution, a Standing Committee on Program and Scientific Work, a Committee on Public Health and Legislation, and such special committees as may from time to time be deemed necessary.

Sec. 2. **Board of Censors.** This board shall examine and report on the qualification of applicants for membership, subjecting each applicant to such examination as it may deem necessary. It shall investigate charges preferred against a member, and report its conclusions and recommendations to the Society. In case of the absence of a member of the board, the President may appoint some member to fill the vacancy. The senior member of the board in point of service shall be chairman of the board.

Sec. 3. **Committee on Program and Scientific Work.** This committee shall consist of the President, Vice President and Secretary. It shall be its duty to promote the scientific and social func-

tions of the Society by arranging attractive programs for each meeting and by urging each member to take part in the scientific work. It shall stimulate fraternalism and good feeling among the members in every way possible. (Provision should be made in this section for annual luncheons, dinners, etc., which the committee believes to be an excellent way to bring members together. Such occasions should be made as inexpensive as possible.)

Sec. 4. **Committee on Public Health and Legislation.** This committee shall consist of three members, who shall be appointed annually by the President. It shall be its duty to enforce and support the sanitary and medical laws of the State in this county, to co-operate with the Committee on Public Policy and Legislation of the State Association in all matters pertaining to legislation, and to prosecute quacks and medical pretenders in this county.

Chapter V—Funds and Expenses.

Section 1. The admission fee, which must accompany the application, shall be \$....., and shall include the annual dues for the fiscal year. The admission fee shall be returned if the applicant is not accepted.

Sec. 2. The annual dues shall be \$..... and shall be payable on January 1 of each year. Any member who shall fail to pay his annual dues by April 1 shall be held as suspended without action on the part of the Society. A member suspended for nonpayment of dues shall be restored to full membership on payment of all indebtedness. Members more than one year in arrears shall be dropped from the roll of members.

Sec. 3. The fiscal year of this Society shall be from January to December, inclusive.

Chapter VI—Order of Business.

The order of business shall be as follows:

1. Call to order by the President.
2. Reading of minutes of last meeting.
3. Clinical cases.
4. Papers and discussions.
5. Unfinished business.
6. Miscellaneous business.
7. Announcements.
8. Adjournment.

Chapter VII—Rules of Order.

The deliberations of this Society shall be governed by parliamentary usage as contained in Roberts' Rules of Order, unless otherwise determined by vote.

Chapter VIII—The Principles of Medical Ethics.

The Principles of Medical Ethics of the American Medical Association shall govern this Society.

Chapter IX—Amendments.

These By-laws may be amended at any regular meeting by a two-thirds vote therefor, provided that such amendment has been read in open session at the preceding regular meeting and a copy of the same has been sent to each member by the Secretary ten days in advance of the meeting at which final action is to be taken.

OFFICERS OF THE AMERICAN MEDICAL ASSOCIATION, 1911-1912

Next Annual Session, Atlantic City, N. J., June, 1912.

President—John B. Murphy, Chicago.

President-Elect—Abraham Jacobi, New York.

First Vice President—William Jarvis Barlow, Los Angeles.

Second Vice President—F. W. McRae, Atlanta, Ga.

Third Vice President—W. R. Tipton, Las Vegas, N. M.

Fourth Vice President—A. L. Wright, Carroll, Iowa.

Editor and General Manager—George H. Simmons, 535 Dearborn Avenue, Chicago.

Secretary—Alexander R. Craig, 535 Dearborn Avenue, Chicago.

Treasurer—William Allen Pusey, Chicago.

Board of Trustees—M. L. Harris, Chicago, 1912; C. A. Daugherty, South Bend, Ind., 1912; W. T. Councilman, Boston, 1912; W. W. Grant, Denver, 1913; Frank J. Lutz, St. Louis, 1913; C. E. Cantrell, Greenville, Tex., 1913; Philip Marvel, Atlantic City, 1914; Philip Mills Jones, San Francisco, 1914; W. T. Sarles, Sparta, Wis., 1914.

Judicial Council—Frank Billings, Chicago, 1912; A. B. Cooke, Nashville, Tenn., 1913; Alexander Lambert, New York City, 1914; James E. Moore, Minneapolis, 1915; Hubert Work, Denver, 1916; Alexander R. Craig, Chicago, Secretary.

Council on Health and Public Instruction—W. B. Cannon, Boston, 1912; J. N. McCormack, Bowling Green, Ky., 1913; H. M. Bracken, Minneapolis, 1914; W. C. Woodward, Washington, D. C., 1915; H. B. Favill, Chicago, 1916; Frederick R. Green, 535 Dearborn Avenue, Chicago, Secretary.

Council on Medical Education—James W. Holland, Philadelphia, 1912; Victor C. Vaughan, Ann Arbor, Mich., 1913; Arthur D. Bevan, Chicago, 1914; George Dock, St. Louis, 1915; J. A. Witherspoon, Nashville, Tenn., 1916; N. P. Colwell, 535 Dearborn Avenue, Chicago, Secretary.

Council on Pharmacy and Chemistry—Reid Hunt, Washington, D. C., 1912; J. H. Long, Chicago, 1912; Julius Stieglitz, Chicago, 1912; J. A. Capps, Chicago, 1913; David L. Edsall, Philadelphia, 1913; R. A. Hatcher, New York City, 1913; L. F. Kebler, Washington, D. C., 1914; John Howland, New York City, 1914; Heury Kraemer, Philadelphia, 1914; F. G. Novy, Ann Arbor, Mich., 1915; George H. Simmons, Chicago, Chairman, 1915; H. W. Wiley, Washington, D. C., 1915; O. T. Osborne, New Haven, Conn., 1916; Torald Sollmann, Cleveland, Ohio, 1916; M. I. Wilbert, Washington, D. C., 1916; W. A. Puckner, 535 Dearborn Avenue, Chicago, Secretary.

OFFICERS OF SECTIONS, 1911-1912.

PRACTICE OF MEDICINE—Chairman, Wilder Tilleston, New Haven, Conn.; Vice Chairman, Walter L. Bierring, Des Moines, Iowa; Secretary, Roger S. Morris, Cathedral and Mulberry Streets, Baltimore.

SURGERY—Chairman, Thomas Huntington, San Francisco; Vice Chairman, George W. Guthrie, Wilkesbarre, Pa.; Secretary, Fred T. Murphy, 309 Marlborough Street, Boston.

OBSTETRICS AND GYNECOLOGY—Chairman, C. Jeff Miller, New Orleans; Vice Chairman, George B. Somers, San Francisco; Secretary, F. F. Simpson, Jenkins Arcade Bldg., Pittsburg, Pa.

OPHTHALMOLOGY—Chairman, Adolf Alt, St. Louis; Vice Chairman, F. T. Rogers, Providence, R. I.; Secretary, Edgar S. Thomson, 19 East Forty-fourth Street, New York.

LARYNGOLOGY, OTOLOGY AND RHINOLOGY—Chairman, George E. Shambaugh, Chicago; Vice Chairman, Francis P. Emerson, Boston; Secretary, Burt R. Shurly, 544 Jefferson Avenue, Detroit.

DISEASES OF CHILDREN—Chairman, Isaac A. Abt, Chicago; Vice Chairman, L. T. Royster, Norfolk, Va.; Secretary, J. P. Sedgwick, 2015 Kenwood Parkway, Minneapolis.

PHARMACOLOGY AND THERAPEUTICS—Chairman, Torald Sollmann, Cleveland, Ohio; Vice Chairman, R. L. Wilbur, San Francisco; Secretary, M. I. Wilbert, Twenty-fifth and E Streets, N. W., Washington, D. C.

PATHOLOGY AND PHYSIOLOGY—Chairman, Leo Loeb, St. Louis; Vice Chairman, William Ophuls, San Francisco; Secretary, A. W. Hewlett, 902 Baldwin Street, Ann Arbor, Mich.

STOMATOLOGY—Chairman, S. L. McCurdy, Pittsburg, Pa.; Vice Chairman, Virgil Loeb, St. Louis; Secretary, Eugene S. Talbot, 31 North State Street, Chicago.

NERVOUS AND MENTAL DISEASES—Chairman, Edward D. Fisher, New York; Vice Chairman, George H. Moody, San Antonio, Tex.; Secretary, E. E. Southard, 37 Trowbridge Street, Cambridge, Mass.

DERMATOLOGY—Chairman, Charles J. White, Boston; Vice Chairman, Martin F. Engman, St. Louis. Secretary, H. R. Varney, 604 Washington Arcade, Detroit.

PREVENTIVE MEDICINE AND PUBLIC HEALTH—Chairman, Rupert Blue, San Francisco; Vice Chairman, Rosalie Slaughter Morton, New York; Secretary, C. Hampson Jones, 2529 St. Paul Street, Baltimore.

GENITO-URINARY DISEASES—Chairman, W. T. Belfield, Chicago; Vice Chairman, James Pedersen, New York; Secretary, Hugh H. Young, Professional Bldg., Baltimore.

HOSPITALS—Chairman, W. B. Russ, San Antonio, Tex.; Secretary, John A. Hornsby, Twenty-ninth Street and Groveland Avenue, Chicago.

OFFICERS OF THE ARKANSAS MEDICAL SOCIETY, 1911-1912

Next Annual Session, Hot Springs, May, 1912.

President—Morgan Smith, Little Rock, Ark.

First Vice President—J. B. Roe, Calico Rock.

Second Vice President—J. C. Amis, Fort Smith.

Third Vice President—J. W. Webster, Siloam Springs.

Treasurer—J. S. Wood, Hot Springs.

Secretary—C. P. Meriwether, Little Rock.

OFFICERS OF SECTIONS.

Medicine—H. P. Collings, Hot Springs, chairman; W. H. Toland, Mineral Springs, secretary.

Surgery—C. F. Perkins, Springdale, chairman; S. E. Thompson, El Dorado, secretary.

Obstetrics and Gynecology—W. A. Snodgrass, Little Rock, chairman; R. L. Saxon, Little Rock, secretary.

Pathology—W. F. Mount, Hot Springs, chairman; Nina V. Hardin, Fayetteville, secretary.

State Medicine and Public Hygiene—W. H. Deaderick, Marianna, chairman; L. T. Evans, Bethesda, secretary.

Dermatology and Syphilology—Wm. R. Bathurst, Little Rock, chairman; J. H. Weaver, Hope, secretary.

Diseases of Children—Wm. Crutcher, Pine Bluff, chairman; E. E. Barlow, Dermott, secretary.

Delegate to American Medical Association—G. A. Warren, Black Rock.

Alternate to American Medical Association—W. N. Yates, Fayetteville.

COUNCILOR DISTRICTS AND COUNCILORS, 1911-1912.

First Councilor District—Clay, Crittenden, Craighead, Greene, Lawrence, Mississippi, Poinsett and Randolph counties. Councilor, M. C. Hughey, Rector. Term of office expires 1913.

Second Councilor District—Cleburne, Fulton, Independence, Izard, Jackson, Sharp and White counties. Councilor, J. H. Kennerly, Batesville. Term of office expires 1912.

Third Councilor District—Arkansas, Cross, Lee, Lonoke, Monroe, Phillips, Prairie, St. Francis and Woodruff counties. Councilor, T. B. Bradford, Cotton Plant. Term of office expires 1913.

Fourth Councilor District—Ashley, Bradley, Chicot, Cleveland, Desha, Drew, Jefferson and Lincoln counties. Councilor, A. D. Knott, Wilmot. Term of office expires 1912.

Fifth Councilor District—Calhoun, Columbia, Dallas, Lafayette, Ouachita and Union counties. Councilor, R. A. Hilton, El Dorado. Term of office expires 1913.

Sixth Councilor District—Hempstead, Howard, Little River, Miller, Nevada, Pike, Polk and Sevier counties. Councilor, L. J. Kosminsky, Texarkana. Term of office expires 1912.

Seventh Councilor District—Clark, Garland, Hot Spring, Montgomery, Saline, Scott and Grant counties. Councilor, R. Y. Phillips, Malvern. Term of office expires 1913.

Eighth Councilor District—Conway, Johnson, Faulkner, Perry, Pulaski, Yell and Pope counties. Councilor, A. H. McKeuzie, Dardanelle. Term of office expires 1912.

Ninth Councilor District—Baxter, Boone, Carroll, Marion, Newton, Searcy, Stone and Van Buren counties. Councilor, F. B. Kirby, Harrison. Term of office expires 1913.

Tenth Councilor District—Benton, Crawford, Franklin, Logan, Sebastian, Madison and Washington counties. Councilor, M. S. Dibrell, Van Buren. Term of office expires 1912.

STATE MEDICAL BOARD OF THE ARKANSAS MEDICAL SOCIETY.

First District—M. Fink, Helena.
 Second District—F. T. Murphy, Brinkley.
 Third District—F. B. Young, Springdale.
 Fourth District—F. T. Isibell, Horatio.
 Fifth District—G. S. Brown, Conway.
 Sixth District—W. S. Stewart, Pine Bluff.
 Seventh District—J. C. Wallis, Arkadelphia.

ECLECTIC STATE MEDICAL BOARD.

R. M. Journegan, Fitzhugh.
 E. L. Sullivan, Poukepsie.
 L. Gardner, Atkins.
 W. C. Billingsbrough, Pine Bluff.
 J. L. Vail, Little Rock.

HOMEOPATHIC STATE MEDICAL BOARD.

E. D. McGill, Helena.
 C. S. Bomgart, Fort Smith.
 G. M. Love, Rogers.
 T. C. Williams, Texarkana.
 W. E. Green, Little Rock.
 E. H. Holliman, Hot Springs.
 W. B. Hughes, Little Rock.

FEDERAL REGISTRATION BOARD OF THE HOT SPRINGS RESERVATION.

L. R. Ellis, Hot Springs.
 Charles Dake, Hot Springs.
 E. H. Martin, Hot Springs.
 Sam L. Steer, Hot Springs.
 Maj. H. N. Hallock, U. S. A.

Officers of Component Societies, 1911-1912

County Society	President	Address	Secretary	Address
Arkansas.....	W. H. Boswell.....	Almyra.....	E. H. Winkler.....	DeWitt
Ashley.....	M. C. Hawkins.....	Parkdale.....	A. E. Cone.....	Portland
Baxter.....	J. T. Tipton.....	Mountain Home.....	J. J. Morrow.....	Cotter
Benton.....	J. W. Webster.....	Siloam Springs.....	J. A. Fergus.....	Rogers
Boone.....	J. H. Fowler.....	Harrison.....	L. Kirby.....	Harrison
Bradley.....	C. N. Martin.....	Warren.....	B. H. Green.....	Warren
Calhoun.....	E. T. Jones.....	Hampton.....	T. E. Rhine.....	Thornton
Carroll.....			J. Fred Bolton.....	Eureka Springs
Chicot.....			E. E. Barlow.....	Dermott
Clay.....	I. H. Cuning.....	Knobel.....	N. J. Latimer.....	Corning
Clark.....			J. H. Bell.....	Arkadelphia
Cleveland.....	W. L. Hartsell.....	Draughon.....	J. F. Crump.....	Rison
Columbia.....			P. M. Smith.....	Magnolia
Conway.....	F. Gordon.....	Morrilton.....	G. W. Ringgold.....	Morrilton
Craighead.....	H. T. Altman.....	Jonesboro.....	P. W. Lutterloh.....	Jonesboro
Crawford.....	O. M. Bourland.....	Van Buren.....	J. E. Blakemore.....	Van Buren
Dallas.....	C. J. March.....	Fordyce.....	H. T. Atkinson.....	Fordyce
Desha.....	J. M. Stuart.....	McGehee.....	R. R. King.....	Walnut Lake
Drew.....	M. Y. Pope.....	Monticello.....	M. B. Corrigan.....	Monticello
Faulkner.....	W. R. Greeson.....	Conway.....	J. S. Westerfield.....	Conway
Franklin.....	J. C. Harrod.....	Denning.....	Thomas Douglass.....	Ozark
Grant.....	J. L. Butler.....	Sheridan.....	W. G. Pittman.....	Grape Vine
Greene.....	L. Jones.....	Beech Grove.....	Olive Wilson.....	Paragould
Hempstead.....	L. J. Gillespie.....	Hope.....	H. R. Giles.....	Hope
Hot Spring.....	E. T. Bramlett.....	Malvern.....	R. Y. Phillips.....	Malvern
Hot Spring-Garland.....	L. H. Barry.....	Hot Springs.....	J. S. Wood.....	Hot Springs
Howard-Pike.....	W. S. Robinson.....	Nashville.....	J. S. Hopkins.....	Nashville
Independence.....	T. N. Rodman.....	Sulphur Rock.....	F. A. Gray.....	Batesville
Jackson.....	A. L. Best.....	Newport.....	C. W. Martin.....	Newport
Jefferson.....	J. S. Jenkins.....	Pine Bluff.....	T. W. Woodul.....	Pine Bluff
Johnson.....	J. S. Kolb.....	Clarksville.....	L. A. Cook.....	Clarksville
Lafayette.....			F. W. Youmans.....	Lewisville
Lawrence.....	H. R. McCarroll.....	Walnut Ridge.....	J. C. Swindle.....	Walnut Ridge
Lee.....	A. A. McClendon.....	Marianna.....	W. B. Bean.....	Marianna
Little River.....	Wm. York.....	Ashdown.....	W. E. Vaughan.....	Richmond
Lincoln.....	W. C. Kimbro.....	Tyro.....	B. P. Farver.....	Star City
Logan.....			J. S. Shibley.....	Booneville
Lonoke.....	S. A. Southall.....	Lonoke.....	F. A. Corn.....	Lonoke
Miller.....	C. A. Smith.....	Texarkana.....	Earl Fuller.....	Texarkana
Mississippi.....	E. E. Craig.....	Wilson.....	O. Howton.....	Oseola
Monroe.....	T. T. Murphy.....	Brinkley.....	E. D. McKnight.....	Brinkley
Montgomery.....	J. B. Stenart.....	Womble.....	L. S. Kennedy.....	Mt. Ida
Nevada.....	Adam Guthrie.....	Prescott.....	A. S. Buchanan.....	Carlsbad, N. Mex.
Ouachita.....	W. L. Newton.....	Camden.....	C. S. Early.....	Camden
Perry.....	M. E. Howard.....	Perryville.....	W. T. Blackwell.....	Bigelow
Phillips.....	L. Hall.....	Turner.....	M. Fink.....	Helena
Polk.....			F. A. Lee.....	Mena
Pope.....	H. B. Wiggs.....	Russellville.....	J. F. Hays.....	Russellville
Prairie.....	J. C. Gilliman.....	Des Arc.....	James Parker.....	DeVall's Bluff
Pulaski.....	Milton Vaughan.....	Little Rock.....	J. B. Dooley.....	Little Rock
Randolph.....	T. Z. Johnson.....	Holmes.....	W. E. Hamil.....	Picahontas
Saline.....	Dewell Gann.....	Benton.....	W. Kelly.....	Benton
Sebastian.....	J. C. Annis.....	Fort Smith.....	Clark Wood.....	Fort Smith
Searcy.....	R. L. Russell.....	Leslie.....	J. O. Cotton.....	Leslie
Sevier.....	C. E. Kitchens.....	DeQueen.....	W. E. Wilson.....	DeQueen
Sharp.....	T. J. Woods.....	Evening Shade.....	A. F. Gray.....	Hardy
St. Francis.....	L. H. Merritt.....	Forrest City.....	J. A. Bogart.....	Forrest City
Union.....	S. E. Thompson.....	El Dorado.....	F. O. Mahoney.....	Huttig
Washington.....	P. L. Hathcock.....	Lincoln.....	Nina V. Hardin.....	Fayetteville
White.....	J. L. Jones.....	Searcy.....	J. W. Hassell.....	Searcy
Woodruff.....	R. Q. Patterson.....	Augusta.....	L. E. Biles.....	Augusta
Yell.....			J. R. Linzy.....	Dardanelle

Members of Component Societies

Arkansas County.

Bunn, A. D. Humphrey
 Boswell, W. H. Almyra
 Derrick, H. C. De Luce
 Fowler, Arthur Humphrey
 Hill, B. L. Stuttgart
 Holcomb, T. J. DeWitt
 Lowe, A. M. Gillett
 Lowe, W. W. Gillett
 Moorhead, W. H. Stuttgart
 Morphew, L. H. Stuttgart
 Park, C. E. DeWitt
 Rasco, C. W. DeWitt
 Sillin, C. W. Stuttgart
 Weld, J. C. Stuttgart
 Winkler, E. H. DeWitt

Ashley County.

Arrington, W. H. Crossett
 Cone, A. E. Portland
 Cockersham, H. E. Portland
 Crow, L. M. Crossett
 George, B. F. Parkdale
 Hawkins, M. C. Parkdale
 Knott, A. D. Wilmot
 Norman, W. S. Hamburg
 Parker, J. L. Snyder
 Simpson, J. W. Hamburg
 Scott, E. M. Hamburg
 Sparks, J. E. Crossett
 Wilks, E. H. Crossett
 Williams, R. S. Parkdale

Baxter County.

Cannady, C. T. Cotter
 Hipp, J. A. Buford
 Morrow, J. J. Cotter
 Tipton, J. T. Mountain Home

Benton County.

Beard, J. H. Gentry
 Buffington, G. H. Decatur
 Cargile, Chas. H. Bentonville
 Clegg, J. T. Siloam Springs
 Clemmer, J. L. Springtown
 Duckworth, F. M. Siloam Springs
 Duncan, M. W. Centertown
 Ennis, H. H. Rogers
 Eubanks, F. G. Decatur
 Ferguson, J. A. Rogers
 Green, L. O. Pea Ridge
 Griffin, J. M. Sulphur Springs
 Highfill, E. J. Osage Mills
 Hughes, G. A. Gravett
 Horton, C. W. Hiwassa
 Hurley, C. E. Bentonville
 Hurley, T. W. Bentonville
 Lindsey, J. H. Bentonville
 Lindsey, E. L. Bentonville
 Longacre, C. E. Siloam Springs
 Martin, J. T. Bentonville
 Mathis, J. B. Lowell
 Pickens, E. E. Rogers
 Pickens, W. A. Bentonville
 Powell, J. T. Maysville
 Rice, T. M. Avoca
 Rice, C. A. Rogers
 Rice, R. S. Rogers
 Sexton, J. J. Siloam Springs
 Smiley, J. L. Bentonville
 Webster, J. W. Siloam Springs
 Wilks, F. M. Gentry
 Gullidge, J. T. Siloam Springs

Boone County.

Baines, Swartz Bergman
 Bolinger, John Lead Hill
 Elton, A. M. Bruno
 Evans, D. E. Harrison
 Fowler, J. H. Harrison
 Hatcock, A. M. Harrison
 Kirby, F. B. Harrison
 Kirby, L. Harrison
 McCurry, D. K. Alpena Pass
 Potts, J. R. Harrison
 Routh, Chas. M. Batavia
 Routh, H. L. Batavia
 Sims, J. L. Harrison
 Vance, A. J. Harrison
 Watkins, G. J. Bellefonte
 Womack, O. K. Valley Springs

Bradley County.

Carruth, O. A. Warren, Ark.
 Crow, M. T. Ingalls
 Fike, W. T. Warren
 Green, B. H. Warren
 Martin, C. N. Warren
 Martin, R. Warren
 Reason, W. B. Hermitage

Calhoun County.

Black, C. T. Thornton
 Jones, E. Harrell
 Jones, E. T. Hampton
 Rhine, T. E. Thornton
 Wilson, D. F. Hampton

Carroll County.

Bolton, Fred J. Eureka Springs
 Clay, W. M. San Diego, Cal.
 Floyd, R. G. Eureka Springs
 Davis, C. E. Eureka Springs
 George, W. P. Berryville
 George, Charles Berryville
 Jordan, J. D. Eureka Springs
 John, J. F. Eureka Springs
 Pace, Henry Eureka Springs
 Poynor, J. W. Eureka Springs
 Poynor, I. M. Berryville
 Poynor, E. E. Green Forest

Chicot County.

Barlow, E. E. Dermott
 Easterberry, Dr. Lake Village
 Henry, R. N. Lake Village
 McGehee, E. P. Lake Village
 Norton, M. M. Sunny Side

Clay County.

Cunning, I. H. Knobel
 Hiller, J. P. Pollard
 Hughey, M. C. Rector
 Latimer, N. J. Corning
 McKinney, A. B. Corning
 Newkirk, C. H. Datto
 Simpson, A. R. Corning
 Stewart, O. R. Palatka
 Thornton, E. W. Piggett
 Waddle, W. V. B. Success

Clark County.

Bell, J. H. Arkadelphia
 Cuffman, J. H. Gurdon
 Evans, Chas. A. Arkadelphia
 Hardy, H. Stroud
 Kirby, D. W. Gurdon
 Moore, W. M. Arkadelphia
 McLean, C. W. Gurdon
 Smith, R. L. Okolona
 Townsend, N. R. Arkadelphia
 Wallis, J. C. Arkadelphia
 Williams, E. K. Arkadelphia
 Yarbrough, J. F. Amity

Cleveland County.

Carter, J. D. Staves
 Crump, J. F. Rison
 Hughes, A. A. Rison
 Hamilton, A. J. New Edinburg
 Hartsell, W. L. Draughton
 Hartsell, R. L. Annover
 Johnson, S. C. Kingsland
 Lealie, C. Kingsland
 Ruth, Junius Orlando
 Vance, J. O. New Edinburg
 Wolford, W. S. Kingsland
 Webb, Abner Fort Smith

Columbia County.

Baker, J. J. Calhoun
 Cooksie, W. C. Atlanta
 Hawkins, J. T. Mt. Holly
 Hunt, W. J. Macedonia
 Longino, H. A. Magnolia
 Smith, P. M. Magnolia
 Stevens, C. D. Magnolia
 Stevenson, C. H. Magnolia
 Twitty, Walter Emerson
 Vaughn, J. T. Plainfield
 Walker, J. C. Plainfield

Conway County.

Bearden, Fred Solgochachia
 Bradley, A. R. Morrilton
 Gordon, F. Morrilton
 Goatcher, A. L. Plumerville
 Hcrtom, Neal Plumerville
 Halbrook, J. F. Cleveland
 Jackson, J. H. Center Ridge
 Logan, B. C. Morrilton
 Martin, J. S. Morrilton
 Powell, P. R. Morrilton
 Presley, W. L. Morrilton
 Ringgold, G. W. Morrilton
 Steele, R. J. Morrilton
 Tate, A. B. Hattieville
 Yates, George Morrilton

Craighead County.

Altman, H. T. Jonesboro
 Burns, J. L. Jonesboro
 Campbell, G. O. Surman
 Crawford, T. O. Bay
 Crawford, J. W. Bay
 Harrison, B. L. Little Rock
 Lutterloh, C. M. Jonesboro
 Lutterloh, P. W. Jonesboro
 Ramsey, J. W. Jonesboro
 Stroud, H. A. Jonesboro
 Walker, B. F. Nettleton

Crawford County.

Bourland, O. M. Van Buren
 Blakenmore, J. E. Van Buren
 Dibrell, M. S. Van Buren
 Galloway, Q. R. Alma
 Lucas, Giles Van Buren
 Parchman, W. L. Van Buren
 Reaves, W. R. Alma
 Sharp, J. C. Alma
 Wigley, J. A. Mulberry
 Wittmer, E. C. Van Buren

Dallas County.

Atkinson, H. H. Fordyce
 Harrison, F. E. Fordyce
 Hope, O. W. Fordyce
 Kelly, O. R. Carthage
 March, C. J. Fordyce
 Wozencraft, W. L. Holly Springs
 Wozencraft, R. O. Princeton

Desha County.

Bowles, T. H. Dumas
 Brown, R. N. McGehee
 Isom, A. Dumas
 King, R. R. Walnut Lake
 McCammon, Vernon Arkansas City
 Smith, C. P. Arkansas City
 Smith, H. T. McGehee
 Stuart, J. M. McGehee
 White, J. A. Dumas
 Chestnutt, C. R. Little Rock

Drew County.

Baker, J. P. Blissville
 Brown, W. A. Monticello
 Cheers, J. F. Winchester
 Collins, A. S. J. Monticello
 Corrigan, M. B. Monticello
 Cotham, E. R. Monticello
 Duckworth, F. L. Monticello
 Fletcher, G. W. Tillar
 Harris, S. Wilmar
 Hughes, S. D. Wilmar
 Kimbro, S. O. Monticello
 Pipkin, J. W. Tillar
 Pope, M. Y. Monticello
 Smith, R. N. Collins
 Stanley, A. C. Tillar
 Thompson, J. A. Dermott

Faulkner County.

Blakely, G. W. Conway
 Brown, Geo. S. Conway
 Clark, W. I. Enders
 DeJarnett, J. W. Guy
 Dickerson, G. D. Conway
 Downs, Joseph H. Vilonia
 Greeson, W. R. Conway
 Henderson, G. L. Greenbrier

MEMBERS OF COMPONENT SOCIETIES—Continued.

Mathews, J. H. Lallie
Mabray, Thos. M. Holland
Munn, J. B. Vilonia
McCullum, I. N. Conway
McMahan, J. E. Kendall
Watson, T. C. Mt. Vernon
Williams, E. T. Greenbrier
Westerfield, J. S. Conway
Ingram, E. M. Holland

Franklin County.

Benefield, C. E. Charleston
Blackburn, E. W. Ozark
Butts, R. J. Altus
Cracker, J. R. Mulberry
Douglass, Thos. Ozark
Gibbons, W. H. Webb City
Harrod, J. C. Denning
Hudson, E. M. Charleston
Jones, W. E. Charleston
Prewett, T. J. Denning
Post, J. L. Altus
Rambo, W. W. Alston
Sherbourne, S. D. Ozark
Turner, H. H. Ozark
Weaver, E. R. Vesta
Williams, H. F. Ozark

Grant County.

Butler, J. L. Sheridan
Jones, J. E. Erin
Pitman, W. G. Grape Vine
Shaw, J. B. Sheridan
Wallen, L. Smeadley

Greene County.

Baker, E. S. Paragould
Bradsher, R. E. Marmaduke
Bridges, Geo. Paragould
Cothern, Thad. Walcott
Dickson, H. N. Paragould
Dickson, Paul Paragould
Graham, M. C. Gainesville
Haley, R. J. Paragould
Hammett, O. W. Paragould
Hopkins, G. T. Paragould
Hardesty, C. A. Paragould
Kennedy, E. L. Marmaduke
Jones, L. Beech Grove
McKenzie, J. G. Paragould
Owens, W. R. Paragould
Scott, F. M. Paragould
Vesser, W. W. Brighton
Wilson, Olive Paragould

Hempstead County.

Autry, J. B. Columbus
B'Shears, B. L. Fulton
Cannon, G. E. Hope
Garner, T. J. Washington
Carrigan, P. B. Hope
Garrett, H. J. F. Hope
Giles, H. R. Hope
Gillespie, L. J. Hope
Kelly, J. L. Hope
Miller, S. A. Hope
Smith, Dan Hope
Saner, W. F. Little Rock
Weaver, J. H. Hope
Weaver, S. J. Fulton
Waddell, J. S. Hope

Hot Spring County.

Bramlett, E. T. Malvern
Burks, J. A. Malvern
Cox, J. A. Donaldson
Carroll, W. C. Saginaw
McCray, E. H. Malvern
Phillips, R. Y. Malvern
Williams, J. M. Malvern

Hot Springs-Garland.

Barry, L. H. Hot Springs
Biggs, E. L. Hot Springs
Biggs, Orvis Hot Springs
Burton, O. H. Hot Springs
Bush, J. W. Hot Springs
Chesnutt, Jas. H. Hot Springs
Collings, H. P. Hot Springs
Collings, S. P. Hot Springs
Connell, W. H. Hot Springs
Davis, R. G. Hot Springs

Dake, Charles Hot Springs
Dewoody, L. C. Hot Springs
Drennen, C. Travis. Hot Springs
Ellis, L. R. Hot Springs
Ellsworth, E. H. Hot Springs
Forbes, W. O. Hot Springs
Grey, D. A. Hot Springs
Garnett, A. S. Hot Springs
Greenway, G. C. Hot Springs
Hay, E. C. Hot Springs
Hebert, G. A. Hot Springs
Holland, T. E. Hot Springs
Holland, E. D. Hot Springs
Horner, J. S. Hot Springs
Jelks, F. W. Hot Springs
Jelks, J. T. Hot Springs
Johns, R. W. Hot Springs
Laws, M. V. Hot Springs
Lower, C. S. Hot Springs
Livingston, J. J. Hot Springs
Martin, E. H. Hot Springs
Merritt, J. F. Hot Springs
Mcunt, M. F. Hot Springs
McClendon, J. W. Hot Springs
Proctor, J. M. Hot Springs
Randolph, J. P. Hot Springs
Robertson, J. A. Hot Springs
Rowland, J. F. Hot Springs
Sanders, T. E. Hot Springs
Short, Z. N. Hot Springs
Steele, S. B. Hot Springs
Steer, S. L. Hot Springs
Strachan, J. B. Hot Springs
Thompson, M. G. Hot Springs
Thompson, M. G., Jr. Hot Springs
Tribble, A. H. Hot Springs
Walker, H. L. Hot Springs
Weimer, R. Hot Springs
Williams, A. U. Hot Springs
Williams, F. M. Hot Springs
Wood, J. S. Hot Springs
Wootten, W. T. Hot Springs

Howard-Pike County.

Black, E. M. Bingen
Gibson, W. M. Nashville
Hopkins, J. S. Nashville
Holt, J. M. Tokio
Hutchinson, D. A. Nashville
Robinson, W. S. Nashville
Toland, W. H. Mineral Springs
Wright, C. M. Buck Range

Independence County.

Case, J. W. Batesville
Dorr, R. C. Batesville
Evans, L. T. Barren Fork
Gray, F. A. Batesville
Heyden, J. Jamestown
Johnson, O. J. T. Batesville
Kennerley, J. H. Batesville
Lawrence, W. B. Batesville
Rodman, T. N. Sulphur Rock
Roe, J. B. Sulphur Rock
Robertson, S. N. Sulphur Rock
Evans, A. A. Newark
McAdams, V. D. Cord
Gray, C. C. Cave City

Jackson County.

Best, A. L. Newport
Bell, J. F. Weldon
Causey, G. A. Swifton
Erwin, I. H. Newport
George, C. E. Crubbs
Graham, J. S. Tuckerman
Gray, C. R. Newport
Jamison, O. A. Tuckerman
Jones, O. E. Newport
Martin, C. W. Newport
Slayton, L. T. Tuckerman
Stephens, G. K. Newport
Walker, H. O. Newport
West, C. Marianna
Watson, E. L. Newport
Willis, L. E. Newport
Wilson, N. F. Elmo

Jefferson County.

Blackwell, O. G. Pine Bluff
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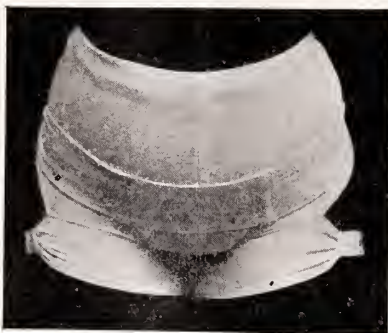
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CONTENTS.

Original Articles:

The Correlation of Diseases of the Kidneys, Heart, Digestive Tract, and the Organs of Respiration, by E. G. Eppler, M. D., Fort Smith 67

Syphilis and Problems in Its Prevention, by Everett Myers, M. D., Fort Smith..... 72

Treatment of Syphilis with "Salvarsan," by Howard P. Collings, B. S., M. D., Hot Springs 81

Symmetrical Gangrene, by Wm. R. Bathurst, M. D., Little Rock..... 88

Department of Syphilology:

The Treatment of Syphilis with Salvarsan, with a Report of Twenty Cases, by Lloyd Oscar Thompson, Ph. B., M. D., Little Rock.. 91

Editorials:

New Organization Needed..... 94

Department of Medicine:

Sietus Vescerum Inversus, by St. Cloud Cooper, M. D., Fort Smith..... 95

Communications 96

Letter From Dr. A. J. Vance..... 96

Personals 96

News Items 96

County Societies:

Pulaski County 97

Mississippi County 98

Franklin County 98

Montgomery County 98

Reader 98

Book Reviews 99

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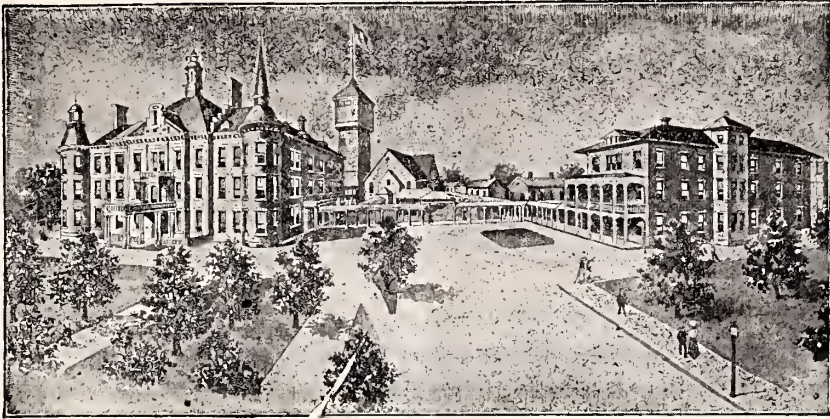
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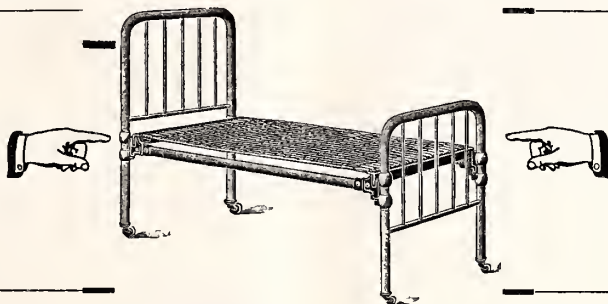
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Original Articles.

THE CORRELATION OF DISEASES OF THE KIDNEYS, HEART, DIGESTIVE TRACT, AND THE ORGANS OF RES- PIRATION.*

By E. G. Epler, M. D.,
Fort Smith.

The several organs of the body are so intimately knitted together that no one may be altered by disease without the others becoming, to some degree, affected. Especially important are the effects of diseases of the kidneys upon the heart, vascular system, lungs, and other parts concerned in respiration; also the organs of digestion. In turn, diseases of these several parts, whether primary or secondary, alter the condition of the kidneys. Vicious circles are established in this way.

The kidneys are the great eliminating organs of the body. If their functional activity has been impaired by some disease, or unusual work in time of stress be required of them to remove accumulating toxic material

from the system, these organs may be overwhelmed and fatal toxemia result.

To allow of the most perfect elimination of effete and toxic matter, the vascular supply of the kidney is large and peculiar. The secretory portions of this organ, the glomeruli and tubules, constitute a complicated mesh-work that may be readily deranged. By changes in the tissue structure of the kidney the blood vessels, the glomeruli and the tubules become knotted, contracted and destroyed. Morbid conditions of other parts secondary to renal affections, by reason of the very great urgency of the symptoms, may seem to constitute the main disease. Under such circumstances the primary and all-important kidney troubles may be masked and often escape notice. The signs and symptoms of chronic interstitial nephritis particularly are at times insignificant and may not be perceived until irreparable damage has been done. Indeed, clinically the disease may not be suspected until the true condition is revealed at autopsy.

Dr. Cabot of Boston studied the postmortem records of a thousand cases occurring in the great Massachusetts General Hospital for the purpose of comparing the clinical findings with the revelations of the deadhouse, and

*Read before the Thirty-fifth Annual Session of the Arkansas Medical Society, at Fort Smith, May 3-6, 1911.

noted errors of commission and omission. In the kind of kidney diseases here mentioned 50 per cent of error was found. That is, one out of two cases of interstitial nephritis was wrongly diagnosed at this hospital. If such is the record in this great institution, where precise work is done and where the observations of one physician are confirmed or corrected by others in turn, the general practitioner working alone, and often to disadvantage, may be excused for an occasional mistake in the diagnosis of this form of renal disease. Other types of chronic nephritis have a baneful effect upon distant organs likewise, but are not of such consequence in this particular, as they may be more readily discovered. This type of kidney disease—interstitial nephritis—may be engrafted upon an acute nephritis, but, generally speaking, it is chronic from its earliest stages. It is most insidious in its course. Nearly everyone over forty years of age may count upon having some degree of cirrhosis of the kidney.

Many causes are held to be effective in producing an interstitial nephritis, such as the hurry and scurry of every-day life, anxiety, outbursts of temper, inactivity of the digestive organs and the increase of toxic matter in the system incident thereto, impure air and the accompanying lack of oxidation, great labor, the use of particular foods, as red meats and condiments. Tobacco is held causative. Exposure to cold and wet, acute affections, syphilis and alcoholism are responsible for the development of interstitial nephritis. The disease is incident to senility; the longer we live the more are we subject to any one or more of the causes mentioned.

Upon viewing the microscopic sections that present very plainly certain pathological changes in the kidney, heart and lungs, we must be impressed with the great impediment to the circulation of the blood in the kidney and the additional tax imposed upon the heart thereby. To better appreciate the condition, we will imagine an apparatus constructed to represent the heart and vessels and a fluid to be forced through them by means of a hand compressing a rubber bulb. Corresponding to the heart's action, the hand must compress the bulb about seventy times a minute, without ceasing, night and day. Further, we will suppose that some one of the tubes representing the blood vessels is

obstructed and the flow of fluid impeded, as actually exists in the various kidney affections. Under such condition the movement of the hand might be continued a short while, but it is certain that fatigue must rapidly ensue. Ultimately the force must waver and cease, unless increased from some source. If failure occurs, the fluid must stagnate. If the walls of the tubes are pervious, transudation takes place, with loss of fluid into the surrounding parts. If the walls are friable they may rupture and extravasations will ensue. Such a condition exists in a patient with interstitial nephritis. The obstruction is in the sclerotic kidney. One may appreciate the increased force required of the heart to do the work under such conditions. The heart responds to the demand for more force, and becomes enlarged or hypertrophied, and the individual stroke stronger accordingly. Later, as the vital power wanes for one reason or another, the heart muscle weakens. The action becomes irregular and less efficient; dilatation ensues, and the valves give way, being incompetent to hold the column of blood. The venous system is engorged by the backward flow. Passive congestion of one or more vital organs is the result. The lungs especially suffer. The kidneys, with the other parts, are likewise affected, and in consequence lose, by degrees, their functional power, already impaired. Possibly weakened vessels rupture and hemorrhages occur. Thus from the mere hindrance to the circulation of the blood by the condition of the kidney many ailments in various parts of the body arise.

Aside from this very serious effect upon the cardio-vascular apparatus, the special secretory cells of the renal tufts and tubules are compressed, atrophied, degenerated, and to a great extent absorbed. As a consequence, toxic material normally thrown out of the body in the urine is retained in ever-increasing quantities. If other organs suffice to eliminate such matter, life may be prolonged. Sooner or later, however, urgent demands are made upon the kidneys to excrete increased waste material, but in vain.

Successful treatment of such conditions requires a just appreciation of both primary and secondary pathological changes and their interrelations. By reason of lack of accuracy and thoroughness in diagnosis, irrational and unsuccessful plans of treatment may be ad-

vised. The clinical record of each case I will relate has points of great interest, and in a measure will serve to present in the concrete, as it were, the main principles I have aimed to discuss. The several sections exhibited have been so selected that they represent one or more of the pathological conditions that presumably existed in these patients.

Well do I remember a case in the Cook County Hospital in Chicago, when I was house physician there. The member of the visiting staff in whose service the case occurred was distinguished as a diagnostician and was a teacher of physical diagnosis in one of the large medical schools. The patient was a woman of about forty years of age, well built, and had enjoyed excellent health generally up to the illness in question. She had, on admission, some fever, a strong, regular pulse, but great difficulty in breathing, especially upon motion. The urine was albuminous and contained casts. There was anasarca. Over the entire chest in front and on both sides there was absolute dulness on percussion, likewise in the dorsal region excepting a space about the size of the palm of the hand on each side of the vertebral column at the level of the scapular spine, where there was some resonance, breath sounds, harsh in kind and roughened by coarse rales. The heart sounds seemed normal. The diagnosis of pleural effusion had been made, but was disputed by the professor. His diagnosis was a double pneumonia, with complete consolidation of both lungs from base to apex, so that air could not be inspired, except in a small area of each at the back. "Why, if the physical signs were due to a pleural effusion," said he, "no breath sounds could be heard and the line of dulness would vary upon motion." By exclusion a double pneumonia was the true condition. A hypodermic syringe was used, and, much to the discomfiture of my superior, serum was withdrawn from the chest. So great was the pressure within that the piston seemed to go back without any traction force. "Well, we will have this case at the clinic and aspirate," was the comment. The patient did not last that long, but died—really drowned. The postmortem examination revealed normal lungs pressed upward and backwards by the copious effusion that filled both sides of the chest. The heart was dilated. The walls were soft, flabby and thin. The kidneys were badly diseased. There was

chronic parenchymatous nephritis. This distinguished diagnostician blinded himself as to the true condition by reason of too great weight being given to pathognomonic signs of pulmonary disease. The cardiac and pulmonary conditions were strictly due to and secondary to the nephritis. If treatment had been adopted accordingly, life might have been prolonged.

Some years ago I had been attending a lady about sixty years of age for indigestion, irregular heart action and impaired function of the kidneys. The arterial walls were sclerotic. At times the urine was copious and clear, at times scanty, cloudy, containing casts and albumin. There was an accentuated second sound of the heart, but I did not detect a valvular murmur. I regarded the cardiac and gastric symptoms as being due to an interstitial nephritis. I at times relieved the more disagreeable symptoms by particular attention to the elimination. Later another physician had charge of the patient and quite valiantly fought a gastritis, as the symptoms of such a condition were very distinct and most troublesome. Much bismuth was used, I was told. The struggle was unavailing. The patient died from gastritis (according to the death certificate). I do not believe that kidney disease was ever suspected of having been at the bottom of the patient's troubles. Yet one might readily attribute the gastric distress to a passive congestion of the mucosa incident to the dilated heart or to the effect of excrementitious substances which are normally eliminated by the kidneys, but in this case had been retained in the system, ultimately causing the death of the patient.

A gentleman from the north had been subject to repeated attacks of quinsy, muscular neuralgia and biliousness for many years. He was a contractor and builder. He put much energy into his work, often overreaching himself. As a result he had some valvular heart trouble, with arterio-sclerosis. Feeling his run-down condition, he went to Hot Springs, Ark., and took a course of baths. I do not know that he consulted a physician there. After the course, from which he was much weakened, he made a trip to Fort Smith. He came under my care on account of great dyspnea, edema of the lungs, dilated heart and valvular insufficiency. His urine was scanty, high colored, albuminous, and contained casts. He could not lie down. At night

his distress was very great, and his condition was most alarming. For three days he was in this state. Thanks to the cathartics, digitalis and rest, he recovered in a measure. He died several years later from Bright's disease. As I regarded the case, there was renal disease, cardiac disease, pulmonary congestion and edema from heart failure. The symptoms of the secondary affections seemed most important and required immediate attention to save life. At the bottom of his ailments were chronic nephritis and deficient elimination of nitrogenous toxic substances.

Recently a gentleman called to have me cut off an elongated uvula that tickled his tongue intolerably. I would have been willing to accommodate him, but on examining the throat I found quite an edema of the soft palate. I hesitated to operate on the uvula. I found a dilated heart; no murmurs, but an accentuated second sound. The arteries were somewhat firm. Age of the patient was sixty. A urinalysis revealed albumin and granular casts. There was edema of the ankles. Patient related that five or six years ago his physician had cautioned him as to his diet, recommending that he should not eat red meats. This advice he had followed fairly well, and had been better for it. At the present time patient complains of twitching of the eyelids, dizziness, irritable bladder. Once before he had an enlarged uvula. As he expressed it, this organ at that time not only touched his tongue, but was so long that on coughing he could force it out almost to his teeth, and it looked like an umbilical cord. I had in mind the kidney affection as the true pathological condition. The other troubles pertaining to the heart, lungs and throat were quite secondary, though more manifest. Digitalis and calomel served well in the treatment, though one might have hesitated to use a vaso-constrictor like digitalis in a condition of arterio-sclerosis in accordance with the common teaching. Cream of tartar was also given. The elongated uvula became of normal size. The evil symptoms abated, but albumin did not disappear from the urine until chloride of calcium was used. Then the albuminuria ceased also. It is not to be supposed that all elongated uvulas are to be cured in this manner, but some are, and without the use of the scissors or guillotine.

An unfortunate man, a painter, had had colic and paralysis from lead poisoning

many years ago. The more acute symptoms were relieved under ordinary treatment. The paralysis of the right arm continued to some extent. Recently he called on me again for treatment for another attack of colic. Of this he was also relieved, but in two or three days he came to the office on account of fever, cough, shortness of breath and pain in the right chest. I found many rales in the right lung, no dulness on percussion. The heart's action was weak and irregular. The arteries were hard. The urine was reported of high color and increased in quantity. He was a very sick man. I advised him to go home and go to bed. The next day a bronchopneumonia had developed. There was much edema of both lungs. Urine for analysis was so contaminated that it was unfit for this purpose, so the exact condition of the kidneys is unknown. I presumed they were sclerotic and impaired in function. The next day the patient became stupid, and the day after died in a uremic coma. The urine at the last was passed involuntarily, and had become scanty. General edema was more marked. Bowels did not react to medicine. Except for the sheer weakness, the patient had not thought himself very ill. The accentuated second sound of the heart, the hardened arteries, the temporary increase in the urine, followed by an almost total suppression, bespoke a chronic nephritis, probably of long standing, and due to plumbism. If it had been possible to have acted favorably on the kidney and promoted elimination of toxic matter efficiently, the catarrhal pneumonia would probably not have been fatal. But the kidney lesions were beyond repair.

This correlation of renal diseases, pneumonic affections and heart failure is well appreciated by most practitioners. Scanty albuminous urine without chlorides and presenting renal casts speaks for an early dissolution in pneumonia. This disease is very fatal in alcoholics and in pregnant women for this very reason, that the kidneys in such conditions are deficient in their action. Very generally the renal condition is secondary to pneumonia and due to the destructive toxins generated, but, the disease having developed, the kidney affection in turn reacts to the detriment of both the heart and lungs. In the last case mentioned the renal condition had existed for years. Uremic coma readily ensued. So thoroughly diseased was the pa-

tient that it was hard to pick out the most important indications for treatment and treat them therapeutically.

By these clinical accounts we see how important are the relations of the more serious diseases to renal affections. There are other diseases, less serious, but very common, that may be aggravated if not actually caused by the impaired action of the kidneys. Catching cold is common enough. The conditions comprehended under this term often accompany renal diseases and are best remedied by attention to the emunctory organs. Tonsillitis of whatever type has been attributed to renal inefficiency. Dr. Stucky of Louisville, Ky., an authority of distinction in this field of practice, insists upon a thorough urinalysis in such cases, and has himself repeatedly found the kidneys impaired as to function. Others have found the urea in the saliva to be increased and hold the same view. The alkalinity of the saliva, so important in digestion of foods, has been found diminished, and at times this secretion has become acid in reaction. Prof. Kyle of Philadelphia has devoted much time to the study of the correlation of kidney diseases and the affections of the nose, throat and lungs, and urges more general investigation of the kidneys than is customary. Thereby are to be learned indications as to the most rational and effective treatment of a variety of disorders. I have observed in our great clinics, both at home and abroad, and in private practice indifference to this matter. Indeed, often have I seen in the hands of eminent specialists cases that I felt very sure would have been benefited by constitutional or general treatment as well as by local measures employed. The men in charge were too intent on operative treatment to pay attention to such prosaic matters as the condition of the stomach, the liver or the kidneys, or to bother with nonspecific internal medication.

To refresh our knowledge as to the pathology of kidney diseases and secondary morbid conditions, I present to you several mounts under the microscope, viz., renal arterio-sclerosis, chronic parenchymatous nephritis, interstitial nephritis, amyloid kidney, nephritis from lead poisoning, from scarlatina, passive congestion of the lungs and brown atrophy of the heart. The slides do not require precise verbal description. Suffice it to say that the destruction of the epithelial cells of the renal

tubes and the obliteration of the blood vessels occurring in such vascular and specially constructed tissue as that of the kidney account for the symptoms observed in renal disease and the evil secondary effects wrought upon other vital organs. Once destroyed, such tissue may not be regenerated by any means in the hands of men any more than that a leg may be made to grow out after amputation. Looking at the kidney tissue, so altered by disease as these sections present it, can you imagine any drug or physical means of cure that may serve to restore the normal structure? I think none. Then have we, by this discourse, led up to the treatment of an incurable state, having urged the importance of the diagnosis, difficult though it be, and, above all, emphasized its relation to secondary or complicating diseases of other vital organs, the relief of which may be attained best, and perhaps only, by the removal of the primary renal affection, a feat that actually is impossible? If so, our efforts can result in nothing practical. This essay will have been purely academic. In reply to such a query, I may say that if the renal changes have not been too great, there may be enough active cellular tissue in a healthy condition that may be preserved and stimulated to such functional activity that the secondary diseases may quite disappear and life be prolonged. Hence, as a self-evident fact, prevention of pathological changes commends itself to us first and last. Remove the known causes, such as the use of alcoholics, tobacco, caffeine and its congeners, nitrogenous foods, nervous and muscular strain. More, certain medicines have proven of great value when used according to the well-known indications. Among them are calomel, digitalis, strophanthus, sweet spirits of nitre, the extracts of broom top, corn silk, American hemp, urotropin, diuretin, calcium chloride, benzoates, dieting, proper physical exercise, good hygiene and hydrotherapeutic measures. These are to be recommended as valuable aids, and are most essential. We have means of relief if the conditions are recognized in time. Almost startling results have been achieved. All cases do not go from bad to worse. We have not been led into a blind alley from which there is no outlet. The prime condition of success is, however, an early and accurate diagnosis and a just appreciation of the various secondary conditions that may arise and their

intimate correlation with that of the primary disease in the kidney.

DISCUSSION.

Dr. Dorr (Batesville)—I want to discuss this subject from a surgical standpoint. I do not believe that we know how to diagnose kidney diseases. I do not believe we know exactly when the kidneys become diseased. I have seen people with all kinds of casts and albumin in the urine. I have seen the same thing in appendicitis, and I have seen it in hemorrhoids. You relieve these surgical conditions and the kidney trouble clears up. The trouble today is, we treat too much of the terminal changes. I don't believe that it is primarily kidney trouble; I believe that it is a form of infection.

Whenever you find this condition, you had better find out whether there is not some sort of infection producing that condition; and whenever you do it, and do it early enough, you can cure those cases. I don't think one case in ten is primarily a disease of the kidneys (Applause).

Dr. Walt (Little Rock)—I did not hear but a small part of the paper, but I like the idea brought out by Dr. Dorr, from the fact that I do not believe we have a kidney disease *per se*. I do not believe that we have any vascular disease *per se*. I think they are simply manifestations of the underlying conditions that produce them. When we connect the anatomy and our living pathology, I think we can reasonably substantiate a position of that kind.

We have to find the disturbing elements to the vascular system, and we can only do it through the blood medium, and that can only be done through the influence of the sympathetic nerve power. Every cell in the body is fed from the same blood stream at practically the same time. And the reason we have manifestations in the vascular system must necessarily depend upon the individual condition that disturbs the return flow that gives us the expression. Instead of being the cause, it is a declaration of a disturbance of the elements that produce them. I do not believe we can have anything *per se*, as vascular disturbances. Heart disease, liver disease, kidney disease and brain disease are simply symptoms or manifestations of an underlying condition that produces them. I think the sooner we recognize these things and recognize the value of the sympathetic nerve

power, the sooner we will understand the physiological living pathology better.

Dr. Epler (Fort Smith)—I brought these specimens forward to show that there is a disease of the kidneys *per se*, and that there are pathological changes in the kidneys. The changes are there, distinct and marked. Anyone can readily see that there is an organic change. Of course, we must take into consideration the etiology, these causes that produce these changes in the kidneys. It may be appendicitis, or the toxemias incident thereto; it may be from exposure to cold, or from rheumatism; it may be from alcoholism. These things must be brought out. These causes, if possible, must be removed, otherwise these changes will take place in the kidneys, and cannot be ascertained or the body protected against them.

Dr. Dorr (Batesville)—These are the terminal changes. They don't have to be changes in the kidneys, but this infection is the cause. They come as a result of the former infection. That's my point.

Dr. Epler (Fort Smith)—Those are pathological changes. The albumin and casts in the urine are changes indicative of Bright's disease. There are changes taking place in the kidneys long before these gross and very serious conditions come about from the cause, whatever it may be, whether septicemia incident to appendicitis, the use of alcohol, or what not. There are changes taking place right along in that organ. The thing, if possible, is to recognize those changes in the early stages so that we can combat them. Of course, as I suggested in the paper, the primary thing to do is to remove those causes, whether by surgical means or not. I thank you for your close attention and liberal discussion.

SYPHILIS AND PROBLEMS IN ITS PREVENTION.*

By Errett Myers, M. D.,
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The character of my subject prevents me from giving you a strictly scientific paper dealing with the lesions and characteristic symptoms of syphilis. Neither do I intend in my paper to undertake to solve the prob-

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lems in the prevention of syphilis. In the time limited to an occasion of this kind, it would be impossible to go into the various matters of detail involving methods and problems of that character, so that my purpose is largely to refer to the causes that contribute to the largest percentage of cases of syphilis.

Syphilis is one of the great plagues of the world, having a history extending far back into the antiquities. During all that long period it has successfully resisted all efforts of prevention, so that today, although satisfactory statistics are not available, it is believed by competent observers more prevalent than ever before.

I assume that it is not necessary for me to dwell upon the history of this disease, or trace its dismal trail down through the centuries, or refer to those countries whose vital resources have been most severely taxed by it. Neither is it necessary for the purpose of this paper that I should go into the etiology, pathology or characteristic lesions of this disease in its primary, secondary and tertiary stages, according to the usual classification. It is well known that it is a highly infectious disease in its primary and secondary stages, and that it is transmissible as an inheritance in almost all of its forms.

More than 80 per cent of all still-born babes is caused by syphilis, and the majority of those suffering from syphilis neonatorum perish during the first few weeks after their birth, and the rest of these have to begin life handicapped by a most persistent disease.

Syphilis causes more blindness than any other disease, with one exception. It is the cause of much of the insanity, paralysis and various degenerative changes that ultimately take place in the nervous and vascular system. It causes much of the poverty and pauperism in the land. Our almshouses are filled with human wrecks floating down life's stream so shattered and so crippled by this disease that they are unable longer to steer their frail barks, and are compelled to raise their signal of distress, which attracts the attention and commands the assistance of charity, and thus they become a burden and a tax upon the productive resources of the community. But my purpose in presenting this subject is to deal more particularly with some of its difficult and varied problems of prevention, in the hope that it will bring about a free discussion on the part of all who

are interested in medico-sociological questions. There may be those present who think that sociology is outside the domain of medicine. If so, in my judgment, you are mistaken. I would remind you that the practice of preventive medicine, especially, is unavoidably connected with our social and economic conditions.

Syphilis and its spread is largely due to ignorance, immorality and poverty. It is most firmly entrenched behind the strong fortress of prostitution and licentiousness.

If any satisfactory progress is to be made in the prevention of this disease it must be brought about through united effort, and by utilizing all those forces which can be brought to bear on the prevention of other contagious and infectious diseases. These forces are: Moral and educational, legal and medical. They are all efficient to a greater or less extent, but none sufficient within itself. With the moralist, the remedy is a simple one. The disease being dependent for its propagation, and for its very existence, upon vice and immorality, the remedy naturally suggests itself. But as society is constituted, the remedy is impractical and becomes a utopian idea.

Syphilis is not a popular subject, even when presented in the most tactful way, and its discussion is tabooed in the polite and refined circles of the church and the home, and hence the youths of the land grow up in ignorance of the far-reaching effects of this disease, not only upon the individual himself, but also upon those whom he transmits it to as an inheritance. But the weakness of the moral side of this question is that moral influences, as at present exerted, do not reach to the fountain source of the trouble. They only skirmish on the outside. The beautiful philosophies of religion and morality do not penetrate the dark recesses of the under world of prostitution.

There have been many legal enactments on the subject that have been equally inefficient as measures for the prevention of this disease. Their sole purpose, apparently, is to derive revenue in the way of fines and of inflicting mild punishment, or of requiring frequent medical examinations, and the segregation of those found infected into venereal wards to undergo treatment until the disease is no longer infectious.

Now, I would have you note the fact that these laws are only applicable to women. Who ever heard of them being enforced against men? The Page law, which went into effect in New York in September, is of this character, and it has been declared unconstitutional. But passing that phase of the question, no law can be regarded as efficient in prevention of disease if it is discriminatory. It must apply to all who are capable of spreading the infection. A law that requires the arrest and physical examination of all prostitutes at frequent intervals, and requiring those found to have an infectious venereal disease to be placed in wards for treatment until they have so far recovered that they are no longer liable to convey infection to others, is manifestly a very imperfect measure of prevention.

In the first place, it is asking something which no medical man can do in all cases, because syphilis, even in its most active stages, has explosive manifestations when the lesions are numerous and easily diagnosed, and periods of latency when it is easy to overlook them, so that a negative report is misleading as a certificate of health. Even the Wassermann reagent and its various modifications, while of great value, are not conclusive in regard to the infectious stages. Besides, even if we admit that few would escape detection under modern methods of examination, how about men who have already been infected by these women? Prostitution is a business conducted for money, and if a considerable percentage of the women in these resorts are found to be syphilitics, and are legally arrested and placed in quarantine for treatment, one might conclude that the law is effective in its apparent effort to make these houses safer for men. But the problem does not work out that way. The supply is always kept up to the demand, and just as soon as their ranks are depleted by disease, the white slave trafficker gets busy and supplies new recruits. And it is a well-known fact among all medical men that the debutantes of vice are the most dangerous source of syphilitic infection. And thus you have the unusual mathematical problem of getting multiplication by subtraction, because the men who have already contracted the disease, and who are placed under no restraint, carry the infection to the new recruits. No law can be very effective as a measure of prevention unless

it requires that all who have contracted syphilis be reported to the health authorities for proper registration, as in the case of other infectious diseases, and a penalty attached for knowingly conveying the disease to others.

All persons who have this disease are not immoral, and are not to blame, but all who willfully infect others commit a crime against the State and against humanity. With the exception of the innocent wives and children and the comparatively small percent who contract the disease from the use of public drinking cups and other unsanitary conditions, this disease seeks no man. The man seeks the disease by his own voluntary act. He assumes the risk. Hence he becomes the most common means of spreading the contagion.

The fatal defect in every scheme of legal enactment or sanitary measure for the prevention of venereal disease has been that the male spreader of the contagion has been utterly ignored as nonexistent. The woman has been held as the chief offender, not only against morality, but as the responsible source of the disease; and all repressive measures have been directed against her alone. But the prostitute confines her activities to the field of immorality. She does not invade the habitations of virtue, though in her own field she is the most active spreader of contagion. Her partner is the important factor in the dissemination of this disease, because he carries the poison home and distributes it to his wife and children, and thus he often becomes directly responsible for the invalid and mutilated wife, the still-born babe, the blind child, the degenerate and weak-minded, and that great mass of diseases that make up the hereditary horrors of syphilis.

Measures for the prevention of syphilis must not be palliative. They only add to the long list of social expedients which have been failures. Any law based upon the theory that the social evil is a necessity is of this character, because it undertakes to establish one standard of morality for men and another for women. I am dealing with problems of prevention, and not with those antiquated theories, too long accepted as true, that man is by nature a sexual hog, and must be allowed unbridled license to indulge in sexual debauch; that prostitution is the oldest profession in the world; that it always has existed and always will exist. But med-

ical science is more rigid in its exactions, and can not admit the necessity of these things from the standpoint of health, and in dealing with prophylactic measures must consider all the factors that influence the propagation and spread of infectious diseases. The prevention of syphilis includes all the problems of the social evil. To be dealt with properly it must be taken out of the hands of grafters. The suppression of prostitution must not be left subject to the whims, caprice and favoritism of the police department. The system of fines should be abolished, and a commission should be appointed having wide authority to act as court of morals, for the constant and persistent repression of the social evil as an immediate method, with absolute annihilation as the ultimate ideal. I have said that syphilis causes poverty, and at the same time it is due to poverty, and that its prevention involves all the problems of the social evil. Let me mention briefly some of the contributing causes from that standpoint. Chief among these are poverty, want of the necessities of life, craving for simple luxuries, ignorance, broken promises, deceit of men, lack of protection to immigrant girls and those coming into the city from the country and smaller towns. The steering of these girls to hotels which "ask no questions" of their patrons is a great contributing cause of wrecked girlhood, and the first downward step to prostitution. Economic stress upon underpaid working girls, who find it convenient to have a "friend" to assist them, and fail to resist the temptations placed in their path; lack of ethical and moral training; abnormality; unhappy home conditions; craving for excitement and change; ignorance of hygiene. These and a hundred other contributing causes might be mentioned if time permitted.

I have referred to these conditions because I am thoroughly convinced of the fact that the prevention of this disease is not purely a sanitary problem, and that we cannot successfully cope with this great social scourge by sanitary measures alone. Many of the causes lie outside the field of sanitary science, and cannot be successfully controlled without the intelligent coöperation of the public. The public should be enlightened as to the dangers of this disease, both to the individual and to society. It is only by this means that public opinion will sanction and

sustain such measures as are deemed necessary by sanitary authorities for the effective control of this and all other preventable diseases. It is only through an enlightened public opinion that we can overcome the subsidizing influence of the quack and the mountebank in his efforts to defeat legislation in the interest of public health and the prevention of diseases. To undertake to legislate for the prevention of diseases may not speak well for the sagacity of the physician, because in a sense it deprives him of his bread and butter, but it does speak well for his philanthropy and humanitarianism.

To control this disease requires organized effort for effectively carrying out educational and repressive measures. The youths of the land must be taught sexual hygiene as they approach that age when they are first coming under the influence of sexual impulse. Boys and men must be taught chivalry and a greater respect for women. Few women are by nature prostitutes; their condition as such is often the result of deception and economic stress. If there is a great army of underpaid working girls, the corporations and factories and department stores and sweat shops must assume their share of this responsibility, and must give more attention to the human side of business and less to the sordid, selfish, self-interest of money-making and self-aggrandizement, and learn the economic value of conserving the health, the comfort and the morality of their employees.

For the physician syphilis is a two-sided problem. That which I have mentioned so far concerns him as a citizen and is the sociological side. It has to do with the prevention of the disease by public enlightenment, by social reform, by readjustment of the customs and habits of life to correspond with modern ideas of sanitation, by an organized effort for philanthropy and investigation, by intelligent and humane methods of dealing with the social evil, by legal enactment and by governmental control.

It means the instruction of children from twelve to sixteen years of age in sex hygiene by personal attention of parents; physical examination of applicants for marriage licenses; better pay for working girls; abolishment of the fining system against known members of vice district; an intelligent and ample probation system for old offenders; a rescue home for new offenders and fallen

girls, where they will come under the elevating influence of the noble women, who, at much self-sacrifice, undertake to befriend these girls and encourage them to regain that degree of self-respect that will make them useful and self-supporting members of society. It means decent homes and hotels for working girls, investigation and supervision of employment agencies, laws calling centers of evil public nuisances, frequent rotation of policemen, possibly women officers for the police force, vigilance in public parks where girls and women visit, less liberty for children except under the eye of their parents, and generally closer attention of parents to the habits, acquaintances and doings of their children—girls and boys.

The other side of the problem concerns the physician alone, and refers to the treatment of the disease when it has broken through the barriers of protection. That phase of the subject will be ably handled by others present. Suffice it to say that all down through the pages of history, from the earliest dawn, it has been the highest function of the physician to protect against the impediments to health, to ward off death and give relief from pain and disquietude, regardless of the cause; and for this the world has bowed to him, and even those within the charmed circle of dominion and power, upon whose heads rest in dazzling splendor, the regal crown, have gladly honored him.

Recently medicine has added another triumph to her many victories in the discovery of the arsenical preparation known as salvarsan, by Ehrlich, which promises to destroy the *spirocheta pallida*, the germ of syphilis.

And thus, with a remedy that will quickly cure the disease in its infectious stages, and utilizing all those forces that can be brought to bear in suppressing the social evil, we are encouraged to believe that the time may come when this scourge will cease to exist in the civilized world, and by proper support of municipal, State and national governments, through wise legislation in the interest of public health, we can confidently look forward to the future development of our race so strong physically, and so free from disease, that they will be the pride of the world, and invincible in every field of action and every line of endeavor.

DISCUSSION.

Dr. Epler (Fort Smith)—We are to be congratulated, I think, for this paper Dr. Myers has presented to us today, dealing with the subject of venereal diseases and means of suppression. The matter is one of much importance to all citizens, and doctors especially, for these diseases are so prevalent. So many men and so many women, both old and young, are afflicted with them. I can heartily commend the principles laid down by Dr. Myers in this paper, and the means that he suggests towards remedying this very common and prevalent evil. Particularly is it a matter of education of the younger people. The older ones, who are hardened in vice, must go to the place they have chosen, I presume. Many of them are beyond help. But the younger people, who are coming towards puberty—children, both male and female—require education as regards their sexual organs, what they are for and how they may abuse them. They do not know. They have but very little means of finding out as to the dangers that beset them. I do not know that I can add anything much to what Dr. Myers has said in his paper on this matter, but I would say something regarding the regulation of prostitution, and of the failures that have ensued where this has been adopted, and carried out faithfully and thoroughly. By the regulation of prostitution the prostitute has her legal status defined. She pursues her calling as a prostitute under the sanction of law. Where regulation is paramount, as in the Old World, the prostitute generally carries on her business, low, vile and mean as it is, equally as lawfully as the man who sells beer or the physician who practices medicine. She, of course, follows out her business within a limited area as to her residence, and furthermore she has frequently to undergo a thorough examination to see that she is afflicted with no venereal disease, and that she may be isolated and be prevented from conveying these infectious troubles to her patrons and visitors in her home in case she is afflicted. These examinations are thorough, made by competent men, and as far as possible the diseased ones are excluded from the practice of this immorality. But when we think of those cities abroad where this institution has been cultivated, as it were, or

regulated as best it can be, where frequent examinations are made, some of you would be astonished to learn of the amount of venereal trouble that exists in those places. In Berlin three-fourths of the student body of the university are afflicted with gonorrhea or syphilis. Three-fourths of those people, young men who are at the very prime of the German race, have become afflicted with these diseases through their indulgence of their sexual lust and in visiting the various prostitutes. These creatures, who are examined by a physician and who are supposed to be clean in their habits, or at least those who are diseased are supposed to be isolated so as to prevent them from conveying it. In Vienna I saw long rows of people, men and women, hundreds of them, march up to the doors of a great general hospital, there to be treated for venereal diseases. So many of them were there that the physicians worked in relays. When one got tired of injecting with salts of mercury and other things, after having treated a large number, he stepped down and away, and another physician took his place and performed the same functions. I was told that in the towns throughout the country venereal diseases were very common, and nearly all were infected. In Munich I heard from one of the professors who was lecturing in one of the best clinics in all Germany a discussion of this matter. It was a mixed audience of about one hundred young men and women. He took three-fourths of an hour to tell them how prevalent venereal diseases were throughout the city of Munich, and he urged the young men and young women to abstain from improper sexual relations for fear of contracting the disease, and the practices of immorality generally. The lecture was a plea for morality. Yet in that town prostitution was regulated. Venereal diseases, however, were general. I will say further in this connection that it was reported in Munich that about one-fourth of the children born were illegitimate. Another one-fourth would have been illegitimate had not the tie of marriage been hastened so as to give a semblance of respectability to the birth of the child. That is, one out of two pregnancies was conceived in illegitimacy, so great was the degree of immorality.

We cannot help but believe that in this matter of regulation of prostitution, taking a very commonplace view of morality, that

young men and young women are stimulated to improper sexual indulgence in those places. We know what this has accomplished for France. We know that her population is diminishing. I have seen that the army needs recruits, and they haven't the young men to fill the ranks, and it is earnestly considered by the French parliament to go to the provinces of Africa and pick out negroes to fill the ranks of that army, because the young men are not available. They have no regulation of prostitution, and those people regard the sexual life there very differently.

In Baden the lower house of the legislature has passed a resolution or act doing away with the regulation of prostitution, because it is ineffectual in preventing venereal diseases.

In this town of Fort Smith, where we all know that venereal diseases prevail, and where the prostitutes have been in a measure corraled in the outskirts of town, some sixty or seventy in number, they are fined every month. The chief of police goes to those places and collects fines as he sees fit. He returns the money to the police court. Last year \$12,000.00, or thereabouts, were the earnings of this police court. Most of that came from drunks and disorderlies, I presume; the balance came from these unfortunate women along Front or First streets. I understand that an effort is being made, by physical examinations of the prostitutes there once a month, to keep out those who are diseased. One of our medical men makes those examinations, more or less thorough, with the view of isolating those individuals who are diseased, to protect the public, that men who visit those resorts may do so more safely. Seventy-five dollars, I believe, is the munificent sum paid by the city for this purpose, under the recommendation of the Board of Health. As to the effectiveness of this, one can imagine who understands the difficulty of determining the diagnosis in a case of gonorrhea or syphilis in a female, as has been pointed out by the writer of the paper. It has the bad effect of inviting men to go to those places, men who are carried away by sexual passion, believing it is safe to indulge in venery under those circumstances. That is a sad, sad mistake. The danger is there as great as it is anywhere, notwithstanding the thorough technic of the physi-

cian who makes the examination. Suppose those individuals may be found diseased, and may not pursue their practices further. They are not isolated; they are in no wise restrained. Nothing is done to hinder them from going back and doing that over again. So it would seem to me that this matter of regulation of prostitution has proven a failure.

I had an experience here on the streets of Fort Smith that taught me a lesson in a strange manner—a lesson which might be to the veneration of womankind. It was during the street fair. I was called down late to see a man who was beaten up in a drunken brawl. Coming back, I passed a couple of women coming from one of the brothels down below. One was a brazen, hardened creature—I do not know how old. The other was a more delicate, girl-like creature. They were both half drunk. A company of young men were following them, pulling them, joking at them and knocking them off the sidewalk, and tearing their clothes from them. The women, in turn, were attacking and cursing them, like these creatures do, to the amusement of the crowd, when a fellow-citizen, a man who is not known particularly for his morality, appeared upon the scene. He stepped up to the women and urged them to go to their home and not create further disturbance; that that was no place for them to be at that time. They turned on him with considerable abuse and cursed him. He stepped back, somewhat abashed, when a young man stepped up to him and tapped him on the shoulder and said, "These are whores." "Whores be damned," said he. "Take your hand off of me or I will kill you." He said, "They are women; these are women. The mother of every man of you was a woman. As you revere your mother, revere these women." The impression was great. The gang of young hoodlums fell back. The women themselves ceased their brawling. He stepped up to them again and persuaded them to go on their way home. That was a lesson that every man and every woman should learn—the matter of venerating womankind.

Another experience I had that shows something different from that. It teaches quite a different lesson, and that is the evil effects of this matter of prostitution. It was

one Sunday evening about sunset that I was called to the bank of the River Poteau to see a woman who had taken laudanum. The circumstances were certainly most distressing. She lay there unconscious on the shelving rocks, in the tawdry finery of one of the houses down on First Street. The crowd passed to and fro looking at the heartrending spectacle as I arrived. The keeper of the brothel came at the same time, both of us having been telephoned to come to that place. The woman said something ought to be done for her—that it was too bad for the creature to lie there. I agreed to that, but hardly was willing to save the woman's life, for I thought she was better dead than alive. I so expressed myself to the keeper of the brothel, but told her I would do what I could to revive her, if she would take her back to the house and call the house doctor, because there are physicians who attend those people and are called upon in emergencies. I administered to the woman as best I could, and she was taken away. I think she ultimately recovered. However, the circumstances in the case were these: Three young men went to that place and hired the woman for an afternoon's amusement. They took her up the river in a boat, and there they assaulted her time and time again, I was told; and later they carried her across the river into the Poteau bottoms, at the Point, and she became so dissatisfied, so humiliated, rough, illiterate and mean as the creature was, she could stand the humiliation no longer, and she took the bottle of laudanum that she had and drank the contents before the young men could prevent it. They hurried to the boat as fast as they could and crossed the river, but not before she became unconscious. Those men were natty young fellows, about twenty-three or twenty-four years of age. But the abuse they subjected that woman to! The veneration of womankind never entered their minds. They hired the woman as they hired the boat, and in order to get the full benefit of their expenditure it was contemplated to make it an endurance test. But that was only one instance that might be related among a hundred others. The lesson is that the man who debauches women should be taught to venerate womankind.

I think that in the matter of suppression of venereal diseases, education is the prime element. It is right to isolate creatures who are diseased, certainly, but find out if they are diseased and put them away and prevent their conveying the infection. As the writer of the paper says, both men and women—the young people who are coming upward with the years—they are the ones who are to be taught to respect the sexual act, to have veneration for womankind and to keep themselves cleanly. They are to be taught the dangers of promiscuous sexual intercourse, and it is by these means, slow and tedious as they may be, that venereal diseases may be suppressed (Applause).

Dr. Southard (Fort Smith)—I was permitted to hear only a part of Dr. Myers' paper, but what I heard I think was very much to the point; but I think we should go a step farther than even he advocated in his paper in our endeavors to control venereal diseases. And, while I am on the floor and think of it, I want to correct a statement made by Dr. Epler. If I understood him correctly, he said that the inspections, as being made in Fort Smith, were made under the sanction or supervision of the Board of Health. That is not true. On the contrary, I do not believe there is a member of the Board of Health that believes that the inspections, as now being made, are worth a "baubee" in any sense of the word. I want to tell you, just in a few words, what it amounts to. The inspector is appointed by the mayor under an ordinance passed some years ago, which was not referred to the Board of Health, and it has never had the sanction of the Board of Health, but it is an independent sort of course. That's all it amounts to in plain language (Applause). This inspector goes down there and makes those inspections, and what does it amount to? How is it done? He makes the inspection, and tells that inmate that she is diseased, and the landlady that that one is diseased, and places them on their honor that they must not spread the disease. Then that report is made to the city clerk, and carefully filed there, and the information kept between the inspector, the landlady, the victim of the disease and the city clerk. Now, what good does it do anybody who is or may be exposed to the danger? It is carefully guarded, so to speak, between four in-

dividuals. Now, those who may be exposed to the danger have almost no means of finding out. They can go around and in a round-about way, in the clerk's office, find out about it.

I tell you what I think ought to be done. I believe that a system of quarantine should be instituted and carried out for those diseases, certainly as well as any other contagious or infectious disease. We know that the bulk of venereal troubles originate in the houses of prostitution. I believe firmly that a practicable system of quarantine could be carried out there that would be effective. I have proposed it. I have proposed it to the Board of Health during the time that I was president of it, but the difficulty was in obtaining the co-operation of the mayor and the police department. It seems in Fort Smith—I don't know how it is in other places—that traffic down there is simply a kind of city affair; that is, it is a municipal government affair. It is not permitted to be supervised by the health department at all. It is a sort of private arrangement with them.

Now, my plan was this (and it had the endorsement of the different boards of health, too): That a system of quarantine should be instituted by the Board of Health, and that every physician and the health officer who discovered contagious diseases there should report it to the health department, the same as any other infectious disease, and then the name of the patient and the number of her room should be placarded in the downstairs hall of the house. Now, if that was done, those who might be in danger could see that, and that individual inmate would therefore be *hors de combat* for the time being, and that would give warning for those who might be in danger, to say the least of it. It would not be trying to cover the thing up, but it would let those know who might be benefited by the knowledge, instead of as at present, giving absolutely no warning at all.

We go to work in a case of smallpox, scarlet fever or diphtheria and we place placards there as a warning of the existing danger. Why not in such conditions as these, that we know spread all over the country from these places? (Applause.)

Dr. Collings (Hot Springs)—Since the doctor has mentioned a way of handling these cases, it might be well to mention the fact that Moses was the best man in history for

the handling of syphilis, as he put to death twenty-four thousand syphilitics in a very short time. I want to congratulate Dr. Myers for the paper. It was certainly an excellent one, and I think one of the best points that the doctor made in the paper was in regard to the home and the education of the children by the parents. It is certainly impossible to regulate prostitution by legal means. Even if it were regulated, it would not prevent syphilis, because a large proportion of syphilitic cases that I see are of men who have not contracted that disease in houses of prostitution. The women in houses of prostitution are women who are prepared and educated in a way to keep from contracting syphilis. The women who practice prostitution to some extent, or, rather in a private way, are the women who are not educated in that way at all. They contract syphilis early, and possibly before they know that they have the disease they have given it to someone else, and it is a very prolific source of infection. As long as the disease cannot be controlled by legal means, certainly the only thing that is left to control the disease is for medical men to control the symptoms of that disease, the contagious stage of the disease, as early as it is possible to do so.

In the last few months, as the doctor mentions, there has been discovered a drug, "606" by name, that will positively help to some extent to relieve the situation, certainly in some cases, because the effect of that drug has proven to be much quicker in its action upon the *spirocheta pallida* in relieving the lesions of syphilis from that germ than anything else has ever done. By relieving the symptoms quickly, at least the manifestations quickly, the infectious stage may be limited quicker, possible more than in the past.

Dr. Thompson (Hot Springs)—My apology for speaking is that it is hard for Hot Springs doctors to be quiet when you mention the word "syphilis" (Laughter). They are all inclined to rise at once. We all have opinions. My opinion is that you cannot educate. No position in the church, no position in education, exempts from syphilis. What I say I say with due respect to religion. I say that I love the church and love its ministry. But I want to report two cases to prove that old question that "all mankind

is weak and little to be trusted." I had a woman who was a preacher's wife referred to me for sarcoma of the cheek. I looked at her and said, "My dear woman, your doctor has made a mistake. This cannot be sarcoma. It is syphilis." Her husband at once said, "Doctor, impossible! I married that woman as a mere girl, away out in the backwoods. Impossible, sir." I said, "I'll treat her for syphilis, or I cannot treat her." He turned around and walked off, and said, "Well, treat her." I treated her. One year after that she was back, and I said, "It was strange indeed that you had syphilis and never knew it." She said, "Oh, yes, I knew it; I caught it from my first husband." She said nothing of the lie they told me the year before.

Again, I had a distinguished preacher who commanded a large salary, something like \$8,000.00 or \$10,000.00 a year, come into my office. He said, "Doctor, I have come to the Springs to be treated for iritis. I believe I had the best oculist in the world, but I thought I would come to the Springs and get a commonplace doctor to treat me" (Laughter). I thought if he wanted a commonplace doctor, it was nothing but right and just that I ask him a commonplace question. I said deliberately, "Sir, did you ever have syphilis?" He caught his arm under his sleeve and began to walk the floor. "Sir? No, sir. No, sir." He was indignant. He embarrassed me. I said, "Did your medical attendant ask you that question at home?" Again he began to walk, and said, "No, sir. No, sir. He viewed me as a Christian gentleman." I was still more embarrassed, and in that great embarrassment I said, "Possibly you might have inherited it." He showed that he was greatly indignant. I said, "You said you went abroad. Didn't the doctors there ask you that question?" I was really apologizing for asking him the question. Again he caught his hand under his arm and walked the floor very rapidly, back and forth, and said, "Sir? Sir? Yes, sir." "What did he say when you told him?" "Sir? He just simply said, 'It doesn't make any difference. I will treat you for it.'" I said, "It makes no difference to me. I will treat you for syphilis, or not treat you." That man came to my office day after day without saying a word, only asking for his directions. He made a beau-

tiful recovery. He left, and some years afterwards I saw him back at church, and I saw the ladies gather around him congratulating him on his beautiful recovery, and he was telling them of the wonders of Hot Springs and its magnificent corps of specialists, and that his eyes had never affected him any more. I went up and had to introduce myself. He got the benefit of Hot Springs, but I knew it was the regular Hot Springs treatment and not the baths alone that cured him (Applause).

TREATMENT OF SYPHILIS WITH "SALVARSAN."*

By Howard P. Collings, B. S., M. D.,
Hot Springs.

Two thousand, six hundred and thirty-seven years B. C., or 4,548 years ago, Hoangty, then emperor of China, an unusually advanced and educated man, "being solicitous of the health of his people, caused all the documents on medicine to be collected and carefully reduced to writing on parchment, all the traditions in regard to therapeutics."

It is interesting to note that at that time, when European inhabitants were savages and cannibals, the enlightened Chinese were using mercurial rubbings for the cure of syphilis. The chancre, chancroid and gonorrhea were recognized as distinct diseases, and so treated.

During the dark ages the duality of the chancre was unrecognized; gonorrhea was considered a part of the same process, and this ignorant state of affairs continued practically until Ricord again established more perfect knowledge of these three diseases. Although the treatment of venereal diseases during the middle ages was left to the hands of charlatans of every description, yet mercury was employed for the cure of syphilis by them.

In modern times we know that mercury has been administered in every conceivable manner, and almost every form known has been utilized to combat this disease. We presume that its use has been more scientific and that its effects were noted with greater precision than they were in China

five thousand years ago. However, we must date the beginning of real progress in the treatment of syphilis with the discovery of its cause, the spirocheta pallida, by Schaudinn and Hoffmann, in 1905.

Since 1903, when Metchnikoff and Roux successfully inoculated the chimpanzee with syphilis, experimentation along this line has been most helpful to investigators. Scientific data now established could not have been possible had it not been for this fact.

In 1906 Wasserman published his first paper regarding the blood serum test, which bears his name, and this was modified in 1909 by Noguchi.

It seems marvelous to contemplate the advantages given to humanity by the discovery of the spirocheta pallida and the Wasserman serum test. It is now possible to make an earlier positive diagnosis, and it is also practically possible to determine when a patient is cured, which has always been a difficult problem, and has baffled those who have treated this disease since history began.

Concomitant with these advancements, the Ehrlich-Hata remedy was evolved from atoxyl in 1909, and in September of the same year Alt, at Uchtspringe, was given a supply for trial on human beings. Since that time, or at least in the last few months, the entire medical world has been made conversant with the phrase, "*therapia sterilizans magna*," which Erligh introduced "to denote the rapid killing off of all the specific germs by introducing a sufficiency of a parasitotropic chemical."

I have made mention in this very brief way of a few historical facts which prepare us better, perhaps, to contemplate the magnitude of the idea of "*therapia sterilizans magna*," or the giving of a single dose of this remedy, which seems to stand a fair chance of replacing, more than any other remedy ever has, mercury, which I have no doubt is among the oldest, if not the oldest, remedy used for the cure of the disease.

Time enough has not yet elapsed to prove that one injection of "salvarsan" has been sufficient to entirely eradicate syphilis from the human system in any given case, yet no one can help being profoundly impressed with its remarkably rapid effect in the relief of manifestations in many cases. That it will ever entirely supersede the use of mer-

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cury probably no one believes at this time, but the writer believes it has proved the most valuable adjunct to the mercurial treatment of syphilis that has ever been devised.

The drug has already been used on many thousands of cases, and since it has been placed upon the general market, being new and so potent for quick results, it has given the charlatan and commercial doctor a chance to give it to anyone who would apply, for a certain consideration, and to guarantee a cure with a single dose. This electrifies, as it were, the applicant, and he submits to the treatment. Naturally, with the assurance that he is cured, he neglects further concern about his condition. This assurance by a certain class of men can, of course, be applied to any treatment they might use; but in this case they have the "*therapia sterilizans magna*" idea back of them, which becomes a source of great danger to the public.

We, at the Springs, are already beginning to see patients from every part of the country who have been given "606," coming for the baths and other well-known remedies, and I predict that we are going to see many more of them in the future. Our oculists state that there have been no cases, so far, appear whose optic nerves have been injured by its use. There seem to be some cases resistant to its influence, as there are cases which mercury controls in an unsatisfactory manner.

The effect of mercury and "606" upon the spirocheta pallida in specific lesions is stated to be identical, in that they cause the disappearance of the spirocheta from the lesions, except that the effect of the "salvarsan" is much more rapid, and at the same time, unfortunately, the effect is often more momentary. The results are not only less persistent than they are from mercury, but they are also less uniform.

From the above it would seem that the best method of procedure in selected cases that are given "salvarsan" would be to follow its administration by the use of mercury in the usual way, without waiting to see whether a Wasserman test is going to be negative from a single dose, but to take advantage of the rapid relief of manifestations and follow by the more stable and plodding effects of mercury. A victorious

army is not satisfied by merely starting its enemy on the run, but follows it up, surrounds and, if possible, captures it.

Fordyce says "a previous or subsequent mercurial treatment influences the Wasserman reaction more favorably," and which he also states supports Ehrlich's contention that the organisms have more than one chemoreceptor, and that the contagion can be attacked from more than one side.

Granting this to be true, we would scarcely be willing to discard the use of a drug that has stood the test of ages, but rather to accept the advantages offered by "salvarsan" in conjunction with mercury. In the selected cases in which I have used "606," I have adopted the following plan of procedure: As soon as all organs are found to be in a healthy state, aside from syphilis, and after the intestinal tract is found to be doing its work properly and the skin and kidneys are functioning as they should, the dose is administered.

It might be well here to explain that in a remarkable number of cases coming to Hot Springs we find an inactivity of the skin, kidneys and intestinal tract, with increase of blood pressure and also an excess of indican in the urine. In such conditions it is necessary to proceed cautiously, even with the baths. The whole process probably depends largely upon the intestinal tract as a cause. The toxic products existing and being absorbed into the circulation produce the other conditions mentioned. It would be utter folly to administer this powerful remedy under such circumstances, which in itself at times congests the kidneys to such an extent that the patient passes blood cells in his urine, or even causes transient nephritis. It is only a question of a few days, with the aid of the waters, that we have at our disposal, to put the patient in a fit and safe condition to administer the treatment. After this drug has been administered, the patient is instructed to continue to drink freely of a spring water that will markedly increase the flow of urine, and, as soon as the temperature is normal (should there be any rise), the patient is given the baths. Should the drug be administered intramuscularly there is a remarkable relief from soreness, stiffness and nerve pains, even without the addition of hot packs following the bath. The feeling of malaise, coated tongue and

sweating, which latter, Corbus states, is caused by the endotoxins that are formed from the killed spirochetes, are quickly relieved and the patient is ready for inunctions in ten days to two weeks, or sooner, if we choose to begin them. A month or six weeks of inunctions are then given in conjunction with the baths, and so far we have not had cause to regret this method of procedure. Our patients being visitors from every section of the country, are with us but a few weeks or months at most, and by this method we can give them the best possible chance for recovery.

What method of administration to use would be best decided, probably, by how long the patient has had the disease. By the intravenous method the arsenic is eliminated more quickly, and would no doubt be the method of selection in very recent infections, but very old cases would be better treated by the intra-muscular method.

The contra-indications, as given by Martindals and Wescott, are as follows:

(a) Severe non-syphilitic retinal and optic disease.

(b) Severe heart and vascular disease.

(c) Severe lung affections.

(d) Severe non-syphilitic kidney affections.

(e) Advanced degenerative processes of the central nervous system.

(f) Those suffering from angina and fever, the treatment should be procrastinated.

DISCUSSION.

Dr. Laws (Hot Springs)—I am happy to open the discussion of Dr. Collings' paper, because I am thoroughly in accord with it in every respect. I believe that salvarsan will prove to be the greatest discovery that has been made in this century, even if it does not, with one injection, cure or thoroughly eradicate syphilis. I believe that salvarsan, at the present time, occupies about the same position as did the diphtheria anti-toxin sixteen years ago, and I believe that some of the objections to the administration of salvarsan that we may have offered today will furnish just as amusing reading as does the literature in regard to the diphtheria anti-toxin published sixteen years ago.

I also believe that in the use of salvarsan, or "606," used in conjunction with mercury, the sheet anchor (I do not think we

will ever be able to do without mercury entirely), we shall come nearer eradicating syphilis from the face of the earth than we could with all that the board of health quarantine could possibly offer.

The great advantage that salvarsan has over mercury in the early stages of syphilis is due to the rapidity of its action. By its administration we will be able to eradicate the infected foci, and consequently the patient who is infected is not so liable to infect others, and in that way it will enable us to do away with the syphilitic process. For, after all, this lack of the control that we have over the patients in the early stages and the inadequate treatment in the early stages, is the reason syphilis is so prevalent. If we could get hold of the cases and have them absolutely under our control, and give them vigorous treatment, even by the old methods, I do not believe it would be long until we would have this disease thoroughly eradicated.

There are certain contraindications that Dr. Collings has enumerated which I think we should live up to, but outside of those contraindications I believe that it should be used in all cases, but always in conjunction with the old sheet anchor, mercury.

Now, in regard to the methods of administering it, I know that the objection has been raised to the intra-venous method; that the arsenic of salvarsan is supposedly eliminated in the course of three or four days. I do not believe that this can be proven, for the reason that patients in whom we have administered by this method have improved continuously for three or four weeks. I had cases under my observation in which I have noted the improvement.

Another objection to that method is that it is more difficult, but when we consider the difficulty of giving it in the ordinary way, or the intramuscular manner, and the easy method of mixing it in the diluted form that we give it intravenously, I do not believe that objection exists.

There have been various methods devised for the administration of it. It seems to me that some of them are exceedingly more complicated. The truth of the matter is, about all one needs to give salvarsan intravenously is a needle, two pieces of rubber tube (I have discarded these clamps because I do not believe they are needed), a connect-

ing piece of glass to connect the two rubber tubes, and a funnel. By first filling the tube with normal salt solution, so that in case you make a mistake and do not get into the vein at the first puncture you will not distribute the salvarsan around the outside of the vein, which is very painful, and then by being sure that you are in the vein, which is noted by the return of blood into the glass connecting the two portions of the tube. After you are certain that the needle is in the vein, by pouring the salvarsan solution there will be no trouble about it at all. This apparatus, however, is the one I have used in fifty cases, and has proved very satisfactory, with the exception that I have discarded these clamps. I do not see any necessity for them. Then, after the solution is in the bottle and mixed, I have a small funnel and fill this portion of the tube with normal saline solution, then by simply elevating it and letting it run back, so as to get rid of the air bubbles, then by pumping it up again, I have the tube filled so that I can make two or three punctures, if necessary, to get into the vein.

In regard to the technic, ordinarily in men or in women where they are not fleshy and the veins are prominent, there is no trouble whatever in putting the needle into the vein. In fleshy arms, especially women, possibly it would be better to make an incision under cocaine, pick up the vein and then use the ordinary infusion cannula. But in the fifty cases I have administered intravenously I have only had to make an incision and pick up the vein in three cases.

Again, I believe that the intravenous method will finally be the method of choice. We must know or learn more about the dosage and how often it should be given, but I believe the remedy has come to stay; and, in conjunction with mercury, I believe that it will come nearer eradicating syphilis than any other method that we have had.

Dr. Holland (Hot Springs)—I was in hopes that the discussion would bring out more particularly the complications, if any should arise, in the administration of this "606." We have had some considerable experience in our office in that matter. The way of administration varies greatly in different cases. Only last Sunday I saw a lady who was injected sub-cutaneously on the back, in Germany, last July, and the sore

is not yet well. I want to say, in passing, that we have in preparation a number of cases that we propose to report when we will have gotten the different varieties and characteristics of syphilis (I mean nervous cases, tabes and different kinds), and when we have gotten those all so that we can classify them, we will report them.

So far, the most satisfactory manner of injection has been intramuscularly with a neutral solution. I want to say that in over one hundred cases, not one single abscess has occurred; redness has only appeared in four cases; not a dose of morphine has been given; nothing stronger than aspirin has been given at any time, and that probably for the first twenty-four hours, with severe pain for about six hours, and probably local pain and lameness for a week, ten days, two weeks, or even three weeks. I want to say, further, that we had one young man that was given three injections inside of seventy days. At no time did the Wasserman prove negative, and yet he gained forty-two pounds and went to work and was as lively and healthy, apparently, as anybody. Yet he still had a secondary eruption. He could not sleep; he could not rest; he was reduced in vitality. He kept it up in a modified form; the blood symptoms were modified, but never did disappear under the treatment, and yet he gained in health, gained in weight, gained in strength and gained in confidence in himself. I just want to give these points in connection with the subject.

Dr. Thompson (Hot Springs)—There is another question in giving the medicine. I have seen several cases where you had a sore occurring from the injection, and Dr. M. G. Thompson, Jr., said to me, "That is from pressure. The dose being too large cuts off the circulation." And he prepared two places and gave the injection at two points, preferring two small sores to one great one, and he had no infection from the injections. It is very simple and very convenient. You can get three syringes for \$2.50, and needles for \$1.00 each. It is convenient to divide the full dose into two syringes, and then if one becomes clogged, slip it out and put on another needle, and make two injections. However, I believe the intramuscular injection is probably more satisfactory, and it is easier to give, but the young man has gone off on the intravenous

method; has treated forty or fifty cases intravenously, and will not now try anything else.

Dr. Chesnutt (Hot Springs)—I wish to compliment Dr. Collings on his very excellent paper, particularly on the conservative attitude, so to speak, he has taken with reference to insisting that the use of "606" should be followed by mercury. I think that it has been definitely settled, whatever the value of "606" may be, that one dose will not cure. That has been settled definitely. The journals are full of recurrences. In fact, you can scarcely pick up a journal in which there are not dormant cases reported, and up to this time they number really thousands in the way of recurrences, and those cases where "606" has been used, and the use of it has been followed up by mercury, there has been practically no history of a recurrence.

Dr. Collings has spoken of the contraindications, and also the methods of its use. I wish to speak particularly of the contraindications, and also to cite a few cases and throw out just a little friendly warning as to what may happen in the use of "606." The question has come up as to whether the method shall be intravenous or intramuscular or subcutaneous; it is one which the physician himself will have to decide. When it is stated that by the intravenous method the salvarsan or arsenic is more rapidly eliminated from the system than by the intramuscular method, that is a mistake. That has been proven experimentally, and the proof has been along this line; by whatever method "606" is given, the storage houses for it are the kidneys, the liver and the spleen, and, whether you give it by the intravenous method or the intramuscular method, or by the subcutaneous method, the arsenic has to be stored there. For instance, there is a very interesting article that came out in the *Allegemeine Wochenschrift* about two months ago, by Bornstien. The title of the article is "The Effect of Syphilis on the Body," and in this work, of course, as far as human beings were concerned, he only had as a guide the urine to examine, but he also carried his work out experimentally on animals. He found out, for instance, in humans and in animals, that arsenic may be demonstrated by the Merck test in the urine for a period of three weeks after the salvarsan

has been used, no matter what the form of injection is. On the other hand, in animals where there was no complications in the giving of it by the intramuscular method, and where, for instance, say the dog was killed at the period of a month or two months after it was given, and the gluteal muscle excised, it was found that no arsenic could be demonstrated in the gluteal muscle. At the same time, an extract from the spleen, liver or kidney would show plenty of arsenic. I think that whenever it is given by the intramuscular method and no complications occur and no necrosis or anything of that kind, then you may expect the arsenic to be stored in these various organs, and the elimination go on just as if it was given intravenously. If you have some complications in the way of necrotic tissue and the like, arsenic will remain there for a great length of time, and will more than likely have to be excised. Recently there was a man sent to the free ward of St. Joseph's infirmary in Hot Springs who had been given an injection of salvarsan in Indiana about three months previous. He stated that it was supposed to be a subcutaneous injection in the region of his shoulder blade. In reality it was intramuscular; it went in the rhomboideus muscle, and following the injection there appeared a very large swelling, an indurated mass, that slowly disappeared, and then the man stated that there was a small lump about the size of his thumb, and gradually increased until it was almost as large as his two fists. This was painless, absolutely; there was no redness over it; there was no suggestion of any abscess; there was a suggestion of a little induration, but there was no sign of an acute abscess. When this was cut down upon it was found to be a huge fibrous mass that had in it two or three ounces of a yellowish fluid, in which it was very easy to demonstrate the presence of arsenic by the Merck test, and the fluid was almost completely sterile. No one would expect any bacterial growth in the presence of all that arsenic. In addition there was a mass that weighed about five or six ounces that was very necrotic. This injection was so given that it looked almost like the mass had partly gone through into some of the intercostal muscles, because in dissecting this off, the posterior wall of this abscess was right along the ribs itself; they had to

almost be dissected free. In fact, I first started to do that, but decided later that it would take too long, it would be very difficult to do, and that I would have to drain anyway, so I merely repaired the posterior abscess wall, and it granulated later. I merely mention that in reference to the excretion of salvarsan to show that where it does not become encapsulated it would be stored in those three organs, no matter by what method you give it. Bernstein states that it stays in the three organs mentioned for three months, and that is the reason why a repetition of the dose of salvarsan should not be made too soon, or until you are absolutely certain that the man will stand it, or until he has had a thorough physical examination to be certain that there has been no eye injury or anything of that kind. That examination ought to be made on the second injection the same as it was on the first.

Now, with reference to the complications that may come up from its use, I wish to mention two or three. For instance, encapsulation, where in this case there has not been a defined abscess, and especially where there was a defined abscess formation. There have been a number of cases in Hot Springs where in the region of the back or in the buttock there would be a hole as large as your fist, a large necrotic mass, and no healing would occur until this mass was excised. Now, another thing in the way of complications: There have been a number of cases of herpes zoster, three or four that I recall particularly, that healed up within a few days after the injection of salvarsan, supposed to be of a specific inflammation of the nerves caused by arsenical poisoning. Then in other cases there have been numerous bladder disturbances, constipation and loss of reflexes. These things I mention in the way of complications are temporary things; something that lasts perhaps for merely a day or two and then disappears.

I want to cite some authority just to show you how some of these cases may act with reference to giving a dose of salvarsan where you have the marvelous result that is said of salvarsan and what may happen subsequently. Oppenheim, recognized as the best authority on nervous diseases on the continent, had a man come to him who had contracted lues in April. By about the mid-

dle of June he had a typical secondary syphilis, and in June he was given a dose of "606." The symptoms disappeared like magic, and on the 15th of August he came to him with typical symptoms of a brain syphilis, which cleared up under mercury and iodide of potassium. In that particular case, if the use of "606" had been followed by mercury there would have been no recurrence. There are many cases of that kind that come up.

Now, with reference to the nerve injuries. I will not take up but just a moment or two to show you some of the complications and some of the deaths and things of that kind that may occur after the use of "606," and also to urge upon you the caution to be certain that all the conditions that Ehrlich laid down in its use must be fulfilled before you use it, and even then it is questionable whether it should be used in every case. I do not agree with one speaker who said it should be used in every case of syphilis. For instance, if a man has had a year or two years' treatment and he has no symptoms of syphilis, and if the use of "606" be followed by mercury just the same as if you had not given him the "606," I cannot see the advantage in that particular case of giving it to him. With reference to these cases, there are some cases reported in the *Berliner Clinical Wochenschrift* with very severe symptoms, involving the optic, auditory, gustatory and facial nerve, in which there was partial paralysis. There is a case reported in the same paper, in which there was a very early case of syphilis, in which "606" was given. In July he developed spinal meningitis and optic neuritis, which was considered to be straight arsenical poisoning. Another case, in No. 4, volume 4, where, immediately following an injection of "606," a case of corneal paralysis beginning twelve days after its use.

Dr. Laws (Hot Springs)—We have with us Dr. William Krauss of Memphis. We would like to hear from him.

Dr. Krauss (Memphis)—I want to preface my remarks with the statement that I am not a therapist, and have nothing to do with the treatment of syphilis. But I have had an opportunity to observe a number of cases that were injected in Memphis, as a pathologist, as a mechanic and as a chemist, being familiar with the intravenous tech-

nic, and having previously designed an apparatus for the purpose of making these injections, and because of the difficulties believed to exist in making this preparation. The cases that I have had an opportunity to observe have had high-grade charts of blood and urine examinations made, the Wasserman test made by myself prior to and at stated intervals subsequent to injection. Our experience bears out what Dr. Collings has so ably expressed in his paper, that whereas we are not dealing with a cure-all, and whereas we are dealing with an agent which is not absolutely parasitotrophic, but sometimes it is organotrophic, nevertheless we have an addition to our armamentarium which has potentiality beyond anything we have heretofore possessed. I believe it is now generally summed up that a single dose of it is equivalent to about six months' treatment under the old system, or by the old method.

One man in Memphis, I have recently learned, has had a death from the injection of it, and that brings up the question of the chemistry of the preparation. It is very important that the technic of its preparation be perfect and that the injection follows immediately after the mixture of the preparation, so that there will be no exudation prior to the injection, because the exudate forms toxins, and it is undoubted that it was responsible for the fatal issue in the case I have heard of.

Now, we do get bad effects. One case developed six weeks after the injection, a very disquieting symptom of both the vestibular and cochlear branch of the right auditory nerve. Fortunately, it apparently amounted to nothing but an exudation, and the hearing has been very nearly restored with the disappearance of the noises and the vertigo.

One case that was injected developed a distinct skin lesion six weeks after the injection, with a positive Wasserman reaction. One patient was injected three times without a complete disappearance of all the symptoms, so that you see there are limitations.

Now, with reference to the respective merits of the different methods of injection, the first one we injected was sub-scapular, and the results were parallel to the case that was reported a while ago. An arsenical cyst developed, which was cut out, opened

and curetted, about seven or eight weeks afterwards; not only the fluid in the cyst, but the tissue surrounding it was heavily charged with arsenic. Clearly, that does not bear out Ehrlich's idea of the "*therapia sterilizans magna*." It cannot if the drug remains *in situ*. Objection has been raised to the intravenous method on the ground that it is eliminated too rapidly, and that consequently more or less enclosed lesions would escape attack by the remedy. I have wondered why some one has not suggested in such cases the preliminary administration of rapidly increasing large doses of iodide of potassium for the purpose of loosening those up, and then give the intravenous injection and get the result that is claimed for the intramuscular injection without its pathological features. There are many things that might be discussed, but I am taking up too much of your time.

Dr. Collings (Hot Springs)—I certainly feel very grateful to all the gentlemen who have discussed the paper. I want to call attention to just one thing that Dr. Holland mentioned. He used the expression that they have to use the intramuscular method by neutral solution. I wish to say that the neutral solution cannot be made. It must be either alkaline to make it a solution, or it will be a suspension. I have never used the suspension method. I make a solution of it by using just as little of the alkali as it is possible to make the solution. In that way the objection that Dr. Thompson refers to of the clogging of the needle, etc., does not hold good. The pain, I am positive, is not more with the solution intramuscularly than it is with the neutral suspension, because I have had an opportunity to watch the suspension method along in my cases with the solution.

Now, while I still hold to the statement that the intramuscular method will be the method of selection in the older cases, not only of the older cases as regards disease, but in older cases as regards the age of the individual. I think a man fifty, fifty-one or fifty-two years old, who is perfectly healthy in every respect, would be a safer man to give "606" in the gluteal muscle than to give it in the vein. I would be more willing to risk it.

Now, there wasn't as much said as I thought might be said in regard to the se-

lected cases. I referred to this in the paper and expected that it would be brought out a little more than it was. The three ideal types of cases which I consider it could be best used in would be the very early case, with very marked secondary manifestations which would make the patient a source of danger to the outside public; the second type would be the type of malignant syphilis that all of us see once in a while, and the third type would be the type of syphilis that is not controlled by mercury—the three ideal types of cases for salvarsan.

Just one report in a few words of a case that was not mine, but happened to be injected only a short distance from where I lived by a brother physician. The patient was a physician himself. It was a case of long standing—I don't know how many years. Tertiary skin lesions, bone lesions, nerve lesions, mental lesions, and, in fact, he was using morphine for every little pain that he had, and he had pains almost every night. The injection was given, he said, four months ago. It was intramuscular. As soon as the pain from the injection was over, he never had any more pains. The pain from the syphilitic lesions stopped almost immediately. As a result of that, he cured himself of the morphine habit and gained about twenty pounds. I asked him in the beginning if he was using the Wasserman technic. He said no, he was not, but he was going to. I said to him, "It seems to me that you are losing valuable time," with the idea that I have expressed in this paper that the best method by which to follow, as soon as it seems ripe to do, was mercury. So, his idea was, instead of doing that, to have a Wasserman made, and if that was positive, then he would have another injection. The appearance of the man, knowing the lesions before and seeing him that way, and four months afterwards, it must impress anybody with intelligence, I don't care who it is.

SYMMETRICAL GANGRENE.*

By Wm. R. Bathurst, M. D.,
Little Rock.

This condition is most frequently spoken of as a local asphyxia, or Raynaud's disease. It is of rather rare occurrence, but every

case has its scientific interest. Pringle defines it as a malady due to disturbed innervation of central origin of the skin blood vessels. Local asphyxia, with coldness and numbness, occurs, along with very pale or often cyanotic discoloration of the skin. For years the process may be limited to these associated symptoms, but necrosis may also occur, beginning at the tips of the fingers and toes.

The subject of this report, Mr. J. S. T., was a farmer by occupation, forty-five years of age; weight, 175 pounds. A native of Alabama, residing in Arkansas for the past twenty years; married, father of two children, one living and in good health; the other died in infancy of pneumonia.

Family history—Father's death occurred at forty-five years of age, due to to gastritis; mother living, about seventy years of age. He has four brothers and one sister living and well; one sister died in infancy. He gives no history of tuberculosis, cancer, syphilis, kidney or heart disease.

Previous Personal History—His health has always been exceptionally good. He has never had any serious illness. However, since the beginning of this present ailment he notices that he is very easily fatigued.

Habits—He uses tobacco, both chewing and smoking. His appetite is large, with an overindulgence in sweets. Drinks coffee three times daily, and up to November of last year he used alcoholics, and frequently to excess.

Present Illness—For ten years his fingers have been extremely sensitive to cold, with transient cyanosis, beginning four years ago. The discoloration was not deep, and was intermittent up to a year ago, when in both hands, summer and winter, the color deepened, becoming more persistent and accompanied with intense pain.

Present Condition—The accompanying photographs represent the patient's condition fairly well at time of first consultation. The skin on the back of the hands and fingers atrophic, red and purplish in color; the extreme ends of the fingers bluish, the skin withered, numb and cold to the touch. Pressure on the ends of the fingers painful. The nails are dry and brittle, and of a deathly white color. Two or three of the nails show a purple discoloration around the matrix, and a transverse ridge extends across the nails on the thumbs and middle fingers.

*Read before the Thirty-fifth Annual Session of the Arkansas Medical Society, at Fort Smith, May 3-6, 1911.



Physical Examination—Negative.

Blood Examination—Blood count, red cells, 5,700,000; white cells, leucocytes, 5,966; lymphocytes, 850; total, 6,816. Hemoglobin, 70 per cent; stained smear, a slight hemolysis and numerous poikilocytes, otherwise normal. Wasserman reaction, negative.

Urinalysis—Color, amber; sediment, none; sp. g. 1.028; total acidity, 0.16225 grms. HCL per 100 c. c. of urine. Albumen, negative; sugar, negative; Diazo, negative; indican, in excess; acetone bodies, positive; beta-oxybutyric acid, positive. Total chlorides, 0.5 grms. Na. Cl. per 100 c. c. of urine. Total phosphates, 0.125 grms. phosphoric pentaoxide per 100 c. c. of urine. Urea, 1.7 per cent. Uric acid, 0.09 per cent. Total nitrogen, 0.938 grms. in 100 c. c. of urine. Microscope, negative.

The figures for total nitrogen elimination are a little low, but in this case the proper ratio is maintained with the urea output. Of course, no definite conclusion can be reached in regard to the nitrogen equilibrium from one urinalysis, although it shows in this case to be fairly maintained.

Conclusions—The blood and Wasserman reaction in this case being negative, the individual undoubtedly is suffering to some extent from the presence of acetone and beta-oxybutyric acid. These products of a perverted metabolism will, if present for any length of time, prevent the proper functioning of the terminal nerve endings in the cutaneous area, causing either a continued dilatation of the capillaries due to the impairment of the vaso-dilators, or, as in this case, a non-relaxation of the vaso-constrictors, cutting off the blood and lymph supply to the affected parts. The blood pigment giving the discoloration cannot, of course, be absorbed, on account of the small amount of lymph present. The dryness of the skin is, of course, a secondary result of the occlusion of the blood supply.

Etiology—The cause of Raynaud's disease has been ascribed to many agencies, such as cold, exposure, general disturbance of nutrition, nephritic disorders, syphilis, and various neuroses.

According to Morton, there are three conditions which will produce a complete or partial obliteration of the caliber of the vessels: (1) Spasmodic contraction of the

muscular fibers of the vessel walls due to vaso-motor spasm due to faulty metabolism. sclerosis accompanying chronic interstitial nephritis; (3) endarteritis of syphilis. The case that I report is undoubtedly one of pure vaso-motor spasm due to faulty metabolism.

Treatment—In cases of this kind we must consider the disease with due regard to its etiology. Relief from severe spasm may be had by applying an elastic bandage over the elbow, or better, to apply the pneumatic bandage of a sphygmomanometer tight enough to shut off arterial circulation. On releasing the constriction the hand flushes and is much warmer and more comfortable.

DISCUSSION.

Dr. Chesnutt (Hot Springs)—I was much interested in Dr. Bathurst's paper. Raynaud's disease is a very rare one. Since I have been in Hot Springs I have not seen a single case, though I have seen several at other places. He mentioned syphilis as being one of the possible causes. I might refer to a case of senile gangrene of the foot, due to lues, though it is somewhat foreign to the discussion. An old man, age sixty-eight, was admitted to the hospital, suffering from a dry gangrene of the foot. The gangrene extended six or eight inches above the ankle and was due to a luetic endarteritis. An amputation was done, and when the tourniquet was removed, the larger vessels having been previously ligated, there was no hemorrhage from the smaller vessels. Naturally, the stump sloughed, but later granulated, having exposed the ends of the tibia and fibula. The man was placed on mercury injections, and later a second amputation was done with poor results. Finally a third amputation was successful, the endarteritis obliterous having stopped.

There is one thing, however, aside from the above, which I desire to mention. Perhaps some of you will recall that I reported, at Little Rock, a case of erythromelalgia, which in many respects is closely allied to Raynaud's disease; in fact, when gangrene is present it is often very difficult to distinguish between them. The trophic changes are very similar.

In this particular man, the chief symptoms were redness and burning of the feet and hands, so severe that he was confined to his bed at times, and for hours he said his

feet felt as if they were in boiling hot water. There was no atrophy of the skin, but the nails were dry and brittle.

Dr. Bathurst suggests faulty metabolism as a cause. In this patient, the urea output was only ten grains in twenty-four hours. The patient had, too, a chronic malaria, which had been present several years. Under malarial treatment and treatment designed to increase elimination the urea increased to twenty-four grains in twenty-four hours, and coincident with an increase in urea there was great improvement in the erythromelalgia.

Dr. Drennen—I have nothing to offer, except I might say that Raynaud's disease, during the course of my lifetime, has been witnessed by me twice. We have endarteritis obliterans, or whatever we see fit to call it, but we all know it is hard to mention the many causes that produce it, and it will necessarily become an object to every physician to ascertain the cause. The treatment, we all know what it is.

Dr. Bathurst—Faulty metabolism lies at the bottom of a very large share of diseases, and it is reasonable to suppose that the elements of the skin participate with other tissues in the tendency of the disease. It has been definitely proven that degenerative changes in the peripheral nerves are followed by lesions in the skin, in the area of distribution of these nerves. These are the result of interference with trophic influences which regulate the nutrition of the parts and diminution in the vaso-motor control of the blood vessels. After injury to a peripheral nerve, or in association with the various forms of peripheral neuritis, the skin in the area supplied by the nerves frequently becomes glossy and atrophic, and vesicles, bullae, ulcers, and even gangrene may develop.

Department of Syphilology.

THE TREATMENT OF SYPHILIS WITH SALVARSAN, WITH A REPORT OF TWENTY CASES.

By Lloyd Oscar Thompson, Ph. B., M. D.,
Pathologist to St. Vincent's Hospital,
Little Rock.

A great deal has been written and said about salvarsan since Paul Ehrlich startled the medical world, and I might add the laity as well, with the announcement of his new

chemo-therapy for syphilis. It has now been proven beyond controversy that salvarsan is at least a distinct aid in the treatment of this world-old disease, and whether or not it will eventually entirely supersede mercury and the iodides, the future alone can tell.

Several questions naturally present themselves in considering the use of this remedy. They may be summarized as follows: (1) Is it specific? (2) Are its effects permanent? (3) Is it dangerous?

I think in the light of the literally thousands of cases reported all of these questions may be answered very optimistically. That it is specific we must admit, after seeing many cases which were resistant to mercury and the iodides, even to the point of salivation, respond to the arsenic preparation in a most remarkable manner. That it cures all cases of syphilis would be a foolish assertion—as foolish as to say quinine will cure all cases of malaria.

The second question cannot be answered definitely as yet. Some cases have apparently been cured and have remained well for over a year and a half.

In answering the third question we must be conservative. A number of fatalities have been reported. Some of these, undoubtedly, can be traced to faulty technic, although Erlich himself states that a drug powerful enough to destroy all the parasites of the body at one blow must be attended with some danger. In the series of cases upon which this report is based there have been absolutely no untoward effects beyond a small amount of induration and soreness at the site of injection when the intramuscular method was used, a little temperature in most of the cases, and nausea and vomiting in one or two. I saw one case, however, in which the remedy was prepared in the physician's office and carried some distance before injection. Two large running sores were present two months later. This is directly contrary to the directions of Ehrlich, who insists that the drug be prepared at the bedside and injected immediately. I think if these directions be followed implicitly, and, above all, if absolute asepsis be observed, the danger is practically *nil*.

Should all cases of syphilis be treated with salvarsan? Blaschko sums up the indications for its use as follows:

1. Malignant cases of syphilis which have not reacted to mercury.

2. All forms and stages of syphilis in individuals who show an idiosyncrasy toward mercury.

3. Cases in which recurrence occurs soon after mercurial treatment.

4. Cases in which recurrence occurs while the patient is taking mercury.

5. Primary lesions before the appearance of secondaries.

6. Constitutional syphilis not hitherto treated in the primary or secondary stages.

7. In late recurring secondary lesions it should be used in combination with mercury and the iodides.

8. In parasymphilitic affections of the cardio-vascular and nervous systems it should be used only in the early stages.

Contraindications to its use are:

1. Advanced disease of the nervous system and general debility.

2. Distinct lesions of the cardio-vascular and renal functions.

3. Idiosyncrasy towards arsenic.

4. Pregnant women seem to tolerate the drug well, but in some instances abortion seems to have been caused by it.

In the first seven cases treated by me I used the Alt intramuscular method. Since then I have been using the intravenous gravity method with the Boehm apparatus, and can say unqualifiedly it is by far the most logical method.

The technic is as follows:

Thirty c. c. of hot, sterile, distilled water is placed in a sterile fifty-c. c. glass mortar, and to this is added the salvarsan, a little at a time, constantly stirring with the pestle. When the entire contents of the ampoule have been dissolved, the clear yellow liquid is poured into a 500-c. c. sterile flask. Then to this are added about ten c. c. of N-5 sterile sodium hydroxide solution. This precipitates the salvarsan. Now, while constantly shaking the flask, more of the sodium hydroxide is added until the precipitate redissolves, and the liquid again becomes clear. Enough warm sterile normal salt solution is now added to bring the total up to 200 c. c. This is poured into the cylinder marked "606" through a sterile filter paper. The cylinder marked "NaCl" has previously been filled with warm, sterile, normal salt solution.

An injection is made into either the median cephalic or median basilic vein. A

tournequet is applied rather tightly above the elbow; the patient is requested to clench the fist; a little 4 per cent cocaine solution is injected over the proposed seat of injection, and a short incision (about one-half an inch) is made until the vein is clearly seen. In cases of thin patients, where the veins stand out very prominently, the incision is unnecessary.

The stop-cock is turned until the salt solution is running very slowly and the needle is inserted into the vein pointing upward. The tournequet is loosened by an assistant and the stop-cock turned until the salt solution is seen to be running freely. It is then turned to the salvarsan side until the desired amount has been injected, when it is again switched to the salt solution side and the needle removed. By this method none of the salvarsan escapes into the tissues. At least ten minutes should be allowed for the injection, as some bad results have been noted if less time is occupied. The incision is closed with a skin clip and an aseptic dressing applied.

In about 50 per cent of cases in from fifteen to thirty minutes there is quite a severe chill, followed by a rapid rise of temperature. There is also sometimes nausea and vomiting, and a slight headache.

In all, I have given this treatment some twenty-seven times, but several of the cases have been lost sight of or have been of too recent date to report, so this paper is based upon but twenty cases. Of the twenty, four were in the primary stage, fourteen secondary, and two tertiary. The ages ranged from eighteen to sixty-five, and, strange to say, both of these cases were in the primary stage.

In every case a thorough physical examination was made, the urine tested, and a Wasserman (Noguchi) reaction done. Following the injection, the patient was kept in bed from two to five days, the urine being tested for albumin and arsenic, and the temperature and pulse taken every four hours. All injections were made in the operating room, under the most rigid aseptic technic, both the operator and assistant wearing rubber gloves.

In all cases but one, improvement was marked. This was a case of secondaries of seven years' standing, with large mucous patches on the inner side of each cheek. The

patient had taken a great deal of mercury and was much discouraged over his condition. At first there seemed to be some improvement, but later the mucous patches were worse, and a second injection advised. This has not yet been consented to.

In three cases a slight albuminuria was noted, which passed off in two or three days. No tube casts were found. Arsenic appeared in the urine the next morning in all cases, and traces could be found for from five to seven days following the Alt method, and from one to three days following the intravenous method.

The following three cases are typical and will be reported in detail:

Case 1.—Secondary Syphilis: Male; age twenty-six. Previous history negative. Initial lesion on penis in December. Macules appeared on body and face in February.

Examination March 1. Several macules on face and body. Mucous patches on fauces and tonsils, urine negative. Noguchi * * * *.

March 5, received .6 grams salvarsan, Alt method; pain severe, radiating down thighs; controlled with hot water bag and morphine, one-fourth grain. Reaction not marked. Uneventful stay in hospital. Up and about third day. Temperature highest second day. Some infiltration and redness at point of injection.

March 7, mucous patches in throat smaller, turning paler and assuming a brownish color; skin lesions paler.

March 8, improvement continuous; full diet. Still some pain at site of injection.

March 10, mucous patches in throat nearly well. Skin lesions very pale.

March 12, left hospital. Says he feels better than for months. Throat practically well. Skin lesions not visible. Still induration and some slight soreness at site of injection; has gained ten pounds. Noguchi *.

Case 2—Primary Affection: Male; age twenty-one. Initial lesion on upper lip, near

center, hard and typical in appearance, the size of a nickel. Duration ten days. No secondaries. Glands negative.

March 6, Noguchi * * * *. Eyes, visceral organs and urine negative.

March 7, .6 grams salvarsan, Alt method. Pain moderate, radiating down thighs. Controlled with hot water bag and morphine, one-fourth grain.

March 8, chancre soft and fast disappearing. Still some soreness and induration at site of injection.

March 2, discharged from hospital. Chancre gone, except slight discoloration.

April 20. Patient seen and no sign of chancre could be detected.

Case 3—Secondary Syphilis: Male; age thirty-one. Previous history negative. Had chancre on penis about middle of November. Developed sore throat about last of January. No skin eruption. First treated chancre with blue ointment and took some mercurial pills.

May 19, examination showed large greenish mucous patches on fauces and tonsils. Heart, lungs and kidneys negative. Noguchi * * * *.

May 20, .5 grams salvarsan intravenously. In about one-half hour developed quite a severe chill, followed by temperature of 100.3. Slight headache and nausea; no vomiting.

May 21, feels fine; slight albuminaria. Wants to get up.

May 22, up and about. Mucous patches turning paler.

May 23, left hospital. Mucous patches much paler. Throat very slightly sore.

May 30, mucous patches almost disappeared.

June 17, throat entirely well. Has gained six pounds. Noguchi faintly positive.

In conclusion, I wish to thank Dr. W. E. Green, Dr. E. R. Dibrell, Dr. W. A. Snodgrass and Dr. C. E. Witt for cases referred to me.

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All communications to this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the State. Notice of deaths, removals from the State, changes of location, etc., are requested.

ADVERTISING RATES.

A schedule of rates will be furnished upon request.

CHANGE OF ADDRESS.

Change of address will be made if the old as well as the new address be given.

ANONYMOUS COMMUNICATIONS.

No anonymous communications will appear in the columns of this Journal, no matter how meritorious they may be.

NOTICE.

All changes of address should be sent to Dr. C. P. Meriwether, secretary of the State Society, as he furnishes the mailing list each month of our members. All communications for publication should be sent to the editor not later than the 5th of each month.

Editorials.

NEW ORGANIZATION NEEDED.

In the words of Dr. J. H. Shibley, "just as life is our most precious possession, so health is life's most valuable asset." To the unfortunate widows and orphans of the State life is just as precious as it is to us. We are responsible and must account for the sanitary surroundings of these unfortunate ones. It is our duty and should be our desire to see to it that Arkansas is made one of the most healthful States in the Union, and the poor of our State do not have to suffer from the ravages of communicable diseases.

Dr. Morgan Smith, Secretary and Sanitary Director for the State Board of Health, is doing some excellent work, but he is without funds from the State and must rely on his personal efforts and the efforts of his few assistants, who are also doing good work.

The records will show of what inestimable value this one man has been to the State with no funds other than a small salary furnished by the Rockefeller Commission.

As an example of how far we are from receiving an appropriation from the State or county, the following letter from Attorney General Hal Norwood to Dr. Morgan Smith will show:

"Replying to your favor of the 18th inst., written from Magnolia, beg to advise that I am of the opinion that under the statutes of the State of Arkansas the County Court has no authority to appropriate any of the county funds to combat and stamp out the dangerous and communicable disease known as hookworm.

"I regret that I am compelled to render this sort of an opinion to you, but can find no authority whatever in our laws for any such appropriation."

In my opinion, we are in need of an "Arkansas Public Health Association," composed of the members of the medical profession, the ministry, the bar, the teachers, and, in fact, all the leading citizens of the State who would declare themselves in sympathy with the purposes of the organization. Great work could be accomplished through an organization of this nature, and I am sure that by proper management the membership and the enthusiasm would increase from year to year until it would result in great good to the people of the State. It is high time for us to exert organized efforts and use every legitimate means at our disposal to bring about a better condition of affairs pertaining to public health. The medical profession must get in closer touch with the lay people of the State. The men, women and children of the State must learn the dangers of bad sanitation, and it is the duty of the medical profession to give them the much-needed opportunity. We should say to the people, "Let us get together and study the peculiar needs of humanity; let us clean away the filth and stamp out all communicable diseases."

Let us see at a glance what the state of affairs are with us. We have less than one-third of the members of the medical profession interested in organized medicine. Our 600,000 school children are receiving almost no instructions regarding hygiene and preventive medicine. We have no system for medical examination of these 600,000

school children. The lay people of the State receive a very limited amount of literature or information regarding the needs of sanitation and the dangers of communicable diseases. We have no county tuberculosis hospitals, and one of the saddest things of all, we have no law prohibiting the marrying of consumptives, syphilitics, inebriates, feeble-minded and degenerates.

Experience has taught us that it requires organized efforts to accomplish much good in sanitary measures, and if what has been said is deemed of sufficient importance by the readers of the Journal to invite further discussion, the Journal will be glad to receive communications.

Department of Medicine.

SITUS VISCERUM INVERSUS.

By St. Cloud Cooper, M. D.,
Fort Smith, Ark.

We do not find, of late years, much said in medical literature about transposition of the viscera. One would think that by consulting the modern text-books on anatomy and surgery mention of this anomaly could be found, but after consulting some fifteen surgical authorities and four late works on anatomy I failed to find it.

James Rae Arneill, in the November number (1902) of the American Journal of Medical Sciences, has a very complete article on this subject. In this article he states that he had written to some twenty-five well-known surgeons, internists and anatomists, and five of the internists and four of the professors of anatomy had never seen a case. In the remaining letters to his inquiry thirty-seven cases were reported.

In Reference Handbook of the Medical Sciences (1908) the same author has an article on this subject, from which I quote:

"Until recent years cases of transposition of the viscera have been discovered, studied and reported chiefly by anatomists and pathologists. Judging from my own personal experience with these cases, and from that of a large number of prominent clinicians and anatomists to whom I addressed letters of inquiry regarding their experience with transposition of the viscera, it would seem that the pendulum had swung about of late

years, and that now a much larger percentage of cases of transposition of the viscera is discovered by the clinician. This fact is a natural result of the much more frequent and careful physical examinations that are now being made. However, even with this improvement, all physicians know that a very small percentage of even sick people submit to careful physical examination, and that the percentage of the entire population who are thus examined is extremely small. * * * Complete transposition is much more common than partial. * * * In a normal patient it is a very common experience to find an entire absence of liver dullness in the right hypochondrium. It is also common to find that the apex beat is neither seen or felt on the left side, especially if the patient is quiet and in the horizontal position. Heart dullness is also frequently absent. So it is easy to understand how these cases of transposition are often overlooked."

A case of transposition of the viscera recently seen by me may be of interest to your readers. A young woman, aged twenty-two, had been having attacks of pain in lower right abdominal quadrant. The pains would be severe and would last for several hours, followed by soreness for several days. These attacks would come on every month or so, not particularly during menstruation. A diagnosis was made of appendiceal colic, and the patient wished to be relieved of her trouble. No physical examination was made, save hurried examination of the heart while the patient was lying on the operating table. The muscle-splitting operation was done with good exposure of the region. A search for the appendix was made and a considerable portion of the intestines in this region were pawed over. Not finding the ileo-cecal junction, and noticing that the colon had the appearance of being like the descending colon and sigmoid, fat tags, etc., I reached over in the left iliac fossa, and by good luck got hold of the appendix, which was delivered through the opening and removed. The appendix was congested and contained fecal matter. This condition did not account for the pain on the right side, and on pulling up the right ovary it was found to be the size of an English walnut, with a large blood clot within. The ovary was split, the clot turned out and the ovary dropped back. The other ovary and the uterus were normal.

A physical examination of this patient afterwards revealed a complete transposition of the viscera. She told me that she always knew that her heart was on the right side, but did not think that it made any difference. A careful physical examination of this patient before operation would have revealed this condition. Her recovery was prompt with no recurrence of her old trouble.

Concerning pain in the lower right abdominal quadrant, it might be well, in connection with this case, to mention a case seen in the clinic of Dr. Fred B. Lund of Boston, at the Boston City Hospital. A young girl was sent to Dr. Lund's clinic with the diagnosis of acute appendicitis. Dr. Lund did the muscle-splitting operation and found, on getting into the abdomen, that he had a case of stone in the right ureter; the appendix was healthy. Being a man of great resource, he stripped back the peritoneum and removed the stone.

I recently heard Dr. Charles Mayo say that it is unfortunate that renal calculi is found oftener on the left side, for when it occurs on the right side the appendix is supposed to be the offender, and is removed, and the patient not relieved. Again, one case in seven that comes to operation for appendicitis has a Lane's kink, and if this is not attended to at the time of removal of the appendix the patient will continue to have abdominal discomfort in the right side.

Communications.

Mount Pleasant, Tex., Aug. 23, 1911.
H. H. Niehuss, M. D., Little Rock, Ark.:

Dear Doctor—I received the July number of the Arkansas State Journal today and I must say that it is certainly a work to be proud of. I like the size for one thing, and then in every other way it is so well arranged. The Journal, besides the society matter, contains several excellent articles.

Success to you. Accept my thanks for the Journal, please.

Yours most truly,

W. H. BLYTHE, *Councilor*.

LETTER FROM DR. A. J. VANCE.

To the Members of the Arkansas Medical Society:

I have been asked to write a paper for the American Medico-Psychological Association for a Symposium on Pellagra, with special

reference to mental symptoms, and have promised to write on "Summary of Pellagra in Arkansas." I will appreciate short reports, and will give due credit in the paper to physicians who are kind enough to report such cases.

Please mention presence or absence of mental symptoms.

Thanking you in advance for your prompt reports, I am,

Yours very truly,

A. J. VANCE.

Personals.

Dr. H. N. Street, formerly of Argenta, now has his offices in the Southern Trust Building, Little Rock.

Dr. W. J. Rutledge of the firm of Snodgrass & Rutledge has recently gone to Salt Lake City for a six months' stay.

Dr. Charles H. Holt of Fort Smith was a recent visitor to Little Rock. He gives encouraging reports of the progress of the Sebastian County Medical Society.

Dr. M. D. Kelly of Carthage spent a few days in our city. Dr. Kelly was one of the good, active workers who was instrumental in reorganizing the Dallas County Medical Society. They now have a good working organization with a full membership.

Dr. F. T. Murphy, secretary of the State Medical Board, was a recent visitor to our city. Dr. Murphy is a very able and popular member of the board, and was very much gratified to learn of the favorable prospects of a much improved medical school for Arkansas.

Dr. James H. Lenow, dean of the Medical Department of the University of Arkansas, is visiting in the East in the interest of the medical school. Dr. Lenow is a very enthusiastic worker, and is endeavoring to make the Medical Department, University of Arkansas, one of the leading medical colleges of the South.

News Items.

Judging from the number of inquiries and the number of students who have already matriculated, we are going to have a "bumper class" for the year one of the Medical Department of the University of Arkansas, says Dr. J. P. Runyan, vice dean.

Dr. E. Meek's hospital, formerly known as the Physicians and Surgeons' Hospital, will hereafter be known as the University Hospital. It is most beautifully located. Dr. Meek, in his efforts to keep it strictly modern and up to date, has recently let a contract for the necessary improvements.

Dr. J. H. Kennerly of the firm of Kennerly & Dorr, Batesville, Ark., is in Europe visiting the clinics of London and Heidelberg. He will return in October.

Dr. J. P. Runyan's private hospital is nearing completion, and will be open about November 1. It will bear the name of St. Luke's Hospital. It will be, when completed, a very handsome and attractive brick structure, located at Twentieth Street and Schiller Avenue, one of the highest points in the city. The city of Little Rock and the profession of the State are indebted to Dr. Runyan for his personal efforts for ample hospital facilities, he having been at the head of the organization which created the hospital on Lincoln Avenue, now known as the University Hospital.

Great preparations are being made for the Sixth Annual Meeting of the Medical Association of the Southwest, which will meet in Oklahoma City, Okla., October 10, 11 and 12, 1911.

The Association will have present as its invited guests Dr. A. R. Edwards of Chicago, Ill., who will deliver the oration on Internal Medicine, and an officer from the Public Health and Marine Hospital Service will be specially detailed to attend this meeting to present a paper on some topic of public interest.

The Secretary has made application for reduced rates on all railroads and the profession of Oklahoma City are planning great things for the members attending; and these things, with an unusually strong program, should attract a larger attendance than any former meeting.

County Societies.

PULASKI COUNTY.

OBITUARY.

Dr. Lex D. Wadley, aged thirty-one, a graduate of the College of Physicians and Surgeons, Little Rock, Ark., class of 1908, died in Little Rock August 3, 1911, of acute uremia, after an illness of about three

months. After graduating, Dr. Wadley spent a year in the Eye, Ear, Nose and Throat Hospital of New Orleans, making a special study of the eye, ear, nose and throat, and after spending a year in general practice at Bigelow, Ark., he removed to Little Rock in January of this year and began to practice his profession. His health soon failed, and for the last two months he was unable to leave the hospital. He leaves a brother, Dr. B. L. Wadley, of Little Rock, a brother in Texas, and his aged father and mother in Jackson, Tenn., where his remains were taken for burial.

A special meeting of the Pulaski County Medical Society, held August 3, adopted the following resolutions regarding Dr. Wadley's death:

"Whereas, It is with deep regret that we learn of Dr. Lex D. Wadley's death; and

"Whereas, Dr. Wadley was a member in good standing of the Pulaski County Medical Society,

"Resolved, That we as members of said society, deplore his untimely death and extend to his bereaved relatives our heartfelt sympathy; and be it further

"Resolved, That a copy of these resolutions be sent to the family, the Journal of the Arkansas Medical Society, and a copy spread on the minutes of this society.

"J. P. RUNYAN, M. D.,

"E. N. DAVIS, M. D.,

"J. B. DOOLEY, M. D.,

"Committee."

Dr. W. H. Frost of the Marine Hospital Service has spent the last three weeks in Little Rock investigating the causes and conditions causing the increased number of typhoid cases in this city. He is, with the assistance of City Physician O. K. Judd, making a thorough canvass of the situation, and is making some valuable suggestions to the profession and to the public.

Dr. Frost is a most courteous and polished gentleman, as well as a very capable and well-posted student of health conditions, and all are pleased at his activities and expect good results from his visit.

The typhoid "epidemic" here has been grossly exaggerated as to extent, and at this writing there are but few cases to be found in the city.

The present year has shown some increase in attendance and interest in the meetings of the county society, as well as a consider-

able increase in membership. There is room for further improvement along these lines, and we trust that when the fall session begins each and every member will make a real attempt (not an excuse) to be present as often as possible.

J. B. DOOLEY, *Secretary*.

Mississippi County.—The meeting of the Mississippi County Medical Society was held in the secretary's office at Osceola, Tuesday night, August 8, at 8:30 p. m., with the following members present: Drs. J. F. Sanders, Blytheville; S. A. Lowry and T. F. Hudson, Luxora; E. E. Craig and H. F. Crawford, Wilson; T. F. Taylor, C. M. Harwell and O. Howton, Osceola.

The program consisted of a Symposium on Diseases of the Gastro-Intestinal Tract, as follows: "Common Ailments of the Stomach," Dr. J. F. Sanders; "Acute and Chronic Catarrhal Enteritis," Dr. C. M. Harwell; "Intestinal Parasites," Dr. T. F. Hudson; "Dysentery and Diarrhea," Dr. H. F. Crawford; and the "Treatment" of these conditions by Dr. S. A. Lowry. Dr. T. G. Brewer should have read a paper on "Peculiarities of Diseases of the Gastro-Intestinal Tract in Children," with special reference to "summer complaints," but on account of illness of an aged brother was unable to attend, this being the only number of the symposium absent. The papers were all well prepared, well presented and thoroughly discussed by all.

O. HOWTON, *Secretary*.

Franklin County.—The Franklin County Medical Society held its regular meeting at Ozark, August 1, President Harrod presiding. The following members were present: Drs. Harrod, Wear, Turner, Post, Sherbourne, Butts, Warren, Porter, Houston, Douglass, T. M. and J. P. Blakely. Drs. T. M. Blakely of Alix, W. C. Porter and Hugh Houston of Coal Hill and I. L. Jacobs of Hunt were elected to membership.

There was much enthusiasm manifested. Dr. Wear gave an interesting talk on "Pleuritic Effusions," which was followed by a very interesting discussion, after which several cases were reported. The report of the committee appointed to draft a fee bill was unanimously adopted. The society adjourned to meet Tuesday, September 5.

THOMAS DOUGLASS, *Secretary*.

Montgomery County.—The Montgomery County Medical Society met at Mount Ida, August 8, with the following members present: Drs. J. D. Robbins, I. N. Freeman, W. D. Freeman, L. S. Kennedy, J. W. Shaw, M. V. Pool and J. H. McLean.

The following visiting physicians were present: Dr. Morgan Smith, Little Rock, president of the Arkansas Medical Society and Secretary and State Sanitary Director for the State Board of Health; Dr. John S. Wood, Hot Springs, treasurer of the Arkansas Medical Society; Dr. A. S. Logan of Caddo Gap, Dr. J. Kirkpatrick of Oden and Dr. G. W. Hargrove.

A paper read by L. S. Kennedy on "Tuberculosis" was enthusiastically discussed by Drs. Morgan Smith, G. A. Hargrove, W. D. Freeman and J. D. Robbins.

Dr. Morgan Smith gave many valuable suggestions on sanitation, organization, etc. Dr. J. D. Robbins, M. V. Pool and L. S. Kennedy were appointed as a committee to investigate the feasibility of organizing a bureau of vital statistics for Montgomery County.

The next meeting will be held at Buckville on the second Tuesday in September.

L. S. KENNEDY, *Secretary*.

Reader.

A PROMISING AGENT IN HAY FEVER.

Dr. J. E. Alberts of The Hague, Holland, undoubtedly performed an important service when he directed the attention of the medical profession to his new combination for the treatment of vaso-motor rhinitis. We refer to the combination now known as anesthone cream, which has heretofore been briefly noticed in these pages, and which contains one part of adrenalin chloride to twenty thousand (1:20,000), and 10 per cent of para-amido-ethyl-benzoate, and is marketed in the form of an ointment.

Applied to the mucous membrane of the nares, anesthone cream has a persistent anesthetic effect, which affords marked relief in hay fever. As para-amido-ethyl-benzoate is only slightly soluble in aqueous fluids, its anesthetic action is prolonged. It does not have the poisonous effect of cocaine upon the protoplasmic element of cells, nor does it depress the heart. Furthermore, there is no tendency to "habit" acquirement.

The preparation came into considerable use during the hay fever season of last year, the consensus of opinion being that it affords a very practical and satisfactory means of relief from symptoms due to hyperesthesia of the nasal mucous membrane, and without ill effects—an important consideration. The fact that the relief continues for several hours in some cases is worth remembering, in view of the fleeting effect of most local anesthetics.

Anesthone cream is supplied in a collapsible tube, with an elongated nozzle to facilitate its application to the nasal mucosa, a portion of the cream about the size of a pea being applied three or four times a day, as may be necessary. It is marketed by Parke, Davis & Co. Whether, as an agent in the treatment of hay fever, it will attain the vogue reached by some other preparations put out by the same company—notably adrenalin chloride solution and adrenalin inhalant, which have been before the medical profession for a number of years, and have thus the advantage which pertains to priority—remains to be seen. At any rate, it is worthy of a fair chance, which, of course, in the long run it is certain to get.

Book Reviews.

A Manual of Practical Hygiene.—For students, physicians and health officers, by Charles Harrington, M. D., late professor of hygiene in the medical school of Harvard University. Fourth edition, revised and enlarged by Mark W. Richardson, M. D., secretary to State Board of Health of Massachusetts. Octavo, 850 pages, with engravings and twelve full-page plates, in colors and monochrome. Cloth, \$4.50 net. Lea & Febiger, Philadelphia and New York, 1911.

This book is so well known that it is not necessary to discuss it in detail. However, I might say that since its revision by Dr. Mark W. Richardson, Secretary to the State Board of Health of Massachusetts, it should be of special interest to the physicians of our State. It contains many facts of interest to us in our efforts to secure better health laws. It is complete in every detail on subjects pertaining to hygiene and dietetics, and deals extensively with condi-

tions that can only be controlled by public health laws. It is everything that is claimed for it.

Handbook of Suggestive Therapeutics, Applied Hypnotism, Psychic Science.—A manual of practical psychotherapy, designed especially for the general practitioner of medicine and surgery. By Henry S. Munro, M. D., Omaha, Neb. Third edition, revised and enlarged. Published by C. V. Mosby Company, St. Louis, Mo. Price, \$4.00.

This book has been rewritten and eight new chapters have been added, making it practically a new work. It brings to the consideration of the medical profession the author's personal experience and clinical evidence as proof of the value of suggestive therapeutics in suggestive medicine. Also a detailed explanation of how to apply suggestion efficaciously, both with and without hypnotism as a therapeutic adjunct. The work, while scientific, is eminently practical, and will enable the general practitioner to apply the principles of suggestion in his everyday life and practice.

A Manual of Clinical Diagnosis by Means of Laboratory Methods.—For students, hospital physicians and practitioners. By Charles E. Simon, M. D., professor of clinical pathology and experimental medicine in the College of Physicians and Surgeons, Baltimore. Seventh edition, enlarged and thoroughly revised. Octavo, 780 pages, with 168 engravings and 25 plates. Cloth, \$5.00 net. Lea & Febiger, Philadelphia and New York, 1911.

This book has, in its present edition, undergone a material change, and indeed a great improvement over the previous edition. The work is now divided into two parts. Part 1 represents the technical portion, and part 2, which is altogether new, the clinical portion. There has been much new matter added. The Wasserman reaction, in particular, has been described in great detail. The chapter on the blood is very thoroughly gone into and the best methods of blood examination treated in detail. The chapter on gastric juice and gastric contents is most practically arranged, giving in detail the methods of examining the motor and secretory functions of the stomach, the presence of ferments and their zymogens, etc. The subjects are exceptionally well arranged and are thorough in every detail.

OFFICERS OF THE AMERICAN MEDICAL ASSOCIATION, 1911-1912

Next Annual Session, Atlantic City, N. J., June, 1912.

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OFFICERS OF THE ARKANSAS MEDICAL SOCIETY, 1911-1912

Next Annual Session, Hot Springs, May, 1912.

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First Vice President—J. B. Roe, Calico Rock.

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Third Vice President—J. W. Webster, Siloam Springs.

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Secretary—C. P. Meriwether, Little Rock.

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Obstetrics and Gynecology—W. A. Snodgrass, Little Rock, chairman; R. L. Saxon, Little Rock, secretary.

Pathology—W. F. Mount, Hot Springs, chairman; Nina V. Hardin, Fayetteville, secretary.

State Medicine and Public Hygiene—W. H. Deaderick, Marianna, chairman; L. T. Evans, Bethesda, secretary.

Dermatology and Syphilology—Wm. R. Bathurst, Little Rock, chairman; J. H. Weaver, Hope, secretary.

Diseases of Children—Wm. Crutcher, Pine Bluff, chairman; E. E. Barlow, Dermott, secretary.

Delegate to American Medical Association—G. A. Warren, Black Rock.

Alternate to American Medical Association—W. N. Yates, Fayetteville.

COUNCILOR DISTRICTS AND COUNCILORS, 1911-1912.

First Councilor District—Clay, Crittenden, Craighead, Greene, Lawrence, Mississippi; Poinsett and Randolph counties. Councilor, M. C. Hughey, Rector. Term of office expires 1913.

OFFICERS OF SECTIONS, 1911-1912.

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Third Councilor District—Arkansas, Cross, Lee, Lonoke, Monroe, Phillips, Prairie, St. Francis and Woodruff counties. Councilor, T. B. Bradford, Cotton Plant. Term of office expires 1913.

Fourth Councilor District—Ashley, Bradley, Chicot, Cleveland, Desha, Drew, Jefferson and Lincoln counties. Councilor, A. D. Knott, Wilmot. Term of office expires 1912.

Fifth Councilor District—Calhoun, Columbia, Dallas, Lafayette, Ouachita and Union counties. Councilor, R. A. Hilton, El Dorado. Term of office expires 1913.

Sixth Councilor District—Hempstead, Howard, Little River, Miller, Nevada, Pike, Polk and Sevier counties. Councilor, L. J. Kosminsky, Texarkana. Term of office expires 1912.

Seventh Councilor District—Clark, Garland, Hot Spring, Montgomery, Saline, Scott and Grant counties. Councilor, R. Y. Phillips, Malvern. Term of office expires 1913.

Eighth Councilor District—Conway, Johnson, Faulkner, Perry, Pulaski, Yell and Pope counties. Councilor, A. H. McKenzie, Dardanelle. Term of office expires 1912.

Ninth Councilor District—Baxter, Boone, Carroll, Marion, Newton, Searcy, Stone and Van Buren counties. Councilor, F. B. Kirby, Harrison. Term of office expires 1913.

Tenth Councilor District—Benton, Crawford, Franklin, Logan, Sebastian, Madison and Washington counties. Councilor, M. S. Dibrell, Van Buren. Term of office expires 1912.

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Officers of Component Societies, 1911-1912

County Society	President	Address	Secretary	Address
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Boone.....	J. H. Fowler.....	Harrison.....	F. B. Kirby.....	Harrison
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Carroll.....			J. Fred Bolton.....	Eureka Springs
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Clark.....			J. H. Bell.....	Arkadelphia
Cleveland.....	W. L. Hartsell.....	Draughon.....	J. F. Crump.....	Rison
Columbia.....			P. M. Smith.....	Magnolia
Conway.....	F. Gordon.....	Morrilton.....	G. W. Ringgold.....	Morrilton
Craighead.....	H. T. Altman.....	Jonesboro.....	P. W. Lutterloh.....	Jonesboro
Crawford.....	O. M. Bourland.....	Van Buren.....	J. E. Blakemore.....	Van Buren
Dallas.....	C. J. March.....	Fordyce.....	H. T. Atkinson.....	Fordyce
Desha.....	J. M. Stuart.....	McGehee.....	R. R. King.....	Walnut Lake
Drew.....	M. Y. Pope.....	Monticello.....	M. B. Corrigan.....	Monticello
Faulkner.....	W. R. Greeson.....	Conway.....	J. S. Westerfield.....	Conway
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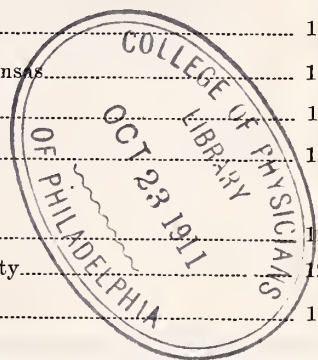
CONTENTS.

Original Articles:

- Management of Fractures and Crushing Injuries of the Extremities, by James A. Foltz, M. D., Fort Smith, Ark. 103
- Abdominal Incisions for Exploratory Purposes, by Charles S. Holt, M. D., Fort Smith, Ark. 108
- Inguinal Hernia, by H. H. Kirby, M. D., Little Rock, Ark. 111
- Report of a Case of Splenectomy, by Preston Hunt, M. D., Texarkana, Ark. 112
- An Unusual Case of Thyroid or Parathyroid Goiter, by R. C. Dorr, M. D., Batesville, Ark. 113
- Surgical Treatment in Trachoma, by Robert Caldwell, Little Rock, Ark. 114

Editorials:

- The Sanitary Privy..... 117
- A Suggestion..... 119
- Pellagra in Arkansas..... 119
- Miscellaneous 120
- Personals 123
- County Societies:
- Johnson County..... 124
- Mississippi County..... 124
- Book Reviews..... 124



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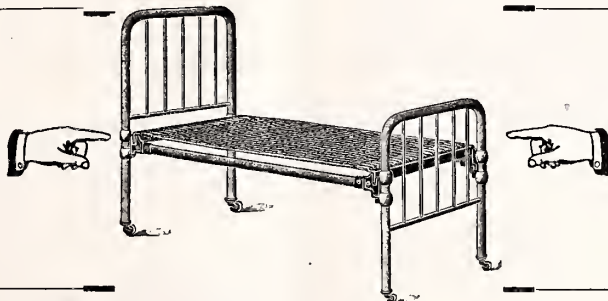
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Original Articles.

MANAGEMENT OF FRACTURES AND CRUSHING INJURIES OF THE EXTREMITIES.*

By James A. Foltz, M. D.,
Fort Smith.

I am here in response to the very kind and much appreciated invitation of your distinguished chairman to read a paper before this society. In trying to select a subject I was much puzzled. I was ashamed of the fact that I had not invented an improvement in the technic of the shortening of round ligaments. I was forced to confess that I had developed no original technic in abdominal surgery, and found I had been amputating breasts very much along the same lines laid out by Halstead and Jabez N. Jackson. My perineorrhaphys and trachelorrhaphys had been done along lines familiar to you all. I could not even offer an improvement on the Mayo method of removing goiters.

While thinking along these lines it occurred to me that, as I had been doing quite a little fracture work in my railroad surgery, I might find something here that would interest you and be of practical importance, and when I considered further that the records of the great hospitals in this country and in England show that from one-seventh to one-fifth of all accidental injuries treated in these institutions are fractures, and that court records show that about 75 per cent of all suits for damages against physicians and surgeons, as well as against railroad companies and other corporations, is for poor functional results following the treatment of fractures, I thought a few remarks along the management of fractures might not prove uninteresting.

I want to say in the beginning, there is no claim made for originality. I have only endeavored to touch some of the points frequently overlooked in the management of fractures.

About the poorest advertisement a doctor can have in a neighborhood is a crooked and powerless limb. No argument can offset this damaging evidence. Thus we see an error in diagnosis, or a failure to apply proper

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remedial measures at the proper time, may end disastrously not only for the patient, but for the doctor as well.

Duncan Eve has said: "A thorough knowledge of the anatomical relations of structures, a wide experience, practical common sense, calm judgment and constant vigilance are the characteristics a surgeon who is called upon to treat fractures stands most in need of."

The most important of these points, to my mind, is constant vigilance. There should be in every case of fracture, or suspected fracture, a careful and frequent inspection of parts. In order that this may be carried out, I invariably use some form of a splint which may be easily and frequently removed with but little disturbance of parts. Of late years I have been using the wood-fiber splints. They are light, can be easily molded by placing in warm water, and are very strong. They are made to fit almost any kind of fracture. In all cases of compound fracture when there is any doubt whatever as to the proper maintenance in apposition of the fragments, a Lane plate, or a similar device, should be used.

In this connection there is one point I want to urge, for it always stands one in good play. I make it a rule in the management of fractures of the extremities when seen early, before we have a great amount of swelling, to make a careful comparison with the opposite member. In this we have nature's most perfect guide. Never be satisfied to leave a broken arm or leg until its contour exactly corresponds with its fellow on the opposite side. Always have both injured and uninjured limbs fully exposed. Always, with few exceptions, do your work under an anesthetic.

In my judgment, whenever a surgeon allows himself to attempt the reduction and subsequent immobilization of a broken limb with the patient's muscles stiff and rigid, and the patient himself probably writhing with pain, he is doing himself and his patient an unnecessary injustice.

Remember that in setting a broken bone, celerity, so much praised, is of little value. Here you may take your time. With your patient anesthetized, carefully and thoroughly make your reduction, compare parts, and use constant care and vigilance that the bones do not become misplaced while applying your splints.

I think it is an excellent rule, and one which we follow in our railroad hospitals, to remove splints and inspect all fractures at least once every week. One exception to this rule we sometimes make, in case of a simple fracture of the tibia or fibula in the middle or upper third, which may be safely treated after the first week by using the plaster cast, which need not be removed for three or four weeks.

Even in simple fractures it is best not to let the plaster cast encircle the leg completely. Apply the cast so that it encircles only about three-fifths of the leg, after the method described recently by Murphy of Chicago. This will prevent swelling and congestion, and will make it easy to remove a strip of the cast, and thus carry out the idea of occasional inspection, which I consider as very important and feel sure that it is a procedure that will save both surgeon and patient considerable annoyance.

Before submitting for your consideration a few cases illustrating the points I have endeavored to bring out, I want to say a word in regard to the value of the X-ray in the management of fractures.

That the X-ray has been of very great value in assisting us in our diagnosis of fractures and other injuries to the long bones, there can be no doubt, but that it is infallible is not true.

The X-ray, as we all know, is not a picture of the parts, but is in reality a picture of a shadow, and even when these pictures have been secured and show up clearly on the negative, there is often a difference of opinion among experts as to their interpretation.

Perhaps the thing of greatest importance the X-ray has proven to us is the fact that most excellent functional results may be obtained in almost any kind of an injury, even though the apposition of the bones is far from perfect; and that perfect apposition and alignment is a condition which, far from being ordinary, is, indeed, an exception even in the work of our most experienced and competent surgeons. This point has its value, particularly in those cases where the doctor will be sued for malpractice on account of a crooked arm or leg.

CASE No. I. J. S. A compound fracture of both condyles of the humerus.

The shaft of the humerus projected out through tissues and skin about one and one-

half inches above external condyle. At the time this case was seen, which was within thirty minutes after the accident occurred, there was very little swelling, and the diagnosis was easily made. Some small nutrient artery had been cut by the jagged end of the bone, and bleeding was profuse. This artery was caught and tied under anesthesia and reduction made. The arm was at first put up in a small posterior long splint, extending from just below the shoulder to just above the wrist, completely immobilizing the elbow extension. This splint was left on for ten days, and the wound, which had been packed with iodoform gauze, was dressed every other day without disturbing the splint until it healed, which was about the seventh day.

On the tenth day this form of splint was exchanged for a right-angle splint, which I had constructed by a tinsmith for this fracture. The arm was allowed to remain in this for ten days more, when a plaster-of-Paris cast was applied, and an X-ray taken through the cast.

The X-ray showed that I had a very poor apposition of the bones. Though everything felt alright, the X-ray showed that the humerus was not in proper place and projected markedly to one side, while a small piece of the external condyle was pushed outward by the shaft of the humerus. The cast was removed, and under anesthesia I attempted to correct this error, after which the arm was again put in a right-angle plaster-of-Paris cast, and another X-ray taken which, while showing an improvement, still showed far from perfect apposition. I decided that this was the best I could do, and that it must be that the arm slipped within the cast.

I pursued the plan of allowing this cast to remain on for ten days, at which time same was removed, and upon inspection the wound appeared alright, and the cast was again put on for ten days more, after which time I cut the cast so as to make two distinct parts, one posterior and one anterior. These parts I kept together by adhesive strips, and began examining the arm every other day. Finding that union was fairly good, I began passive motion. For three months active and passive motion was persisted in, so that today Mr. S. has an arm which has yielded over three-fourths its original functions.

This was a type of injury which I think

I am safe in saying would ordinarily have resulted in a stiff elbow, with the loss of probably 75 per cent of motion. This, I am sure, would have been the result had the cast been put on permanently instead of a form of splint. I may say here that I have since examined this by the X-ray, and it looks anything but pleasing. However, functional results are good.

CASE No. II. T. J. S. A compound, comminuted fracture of both bones of both legs, caused by patient falling twenty-six feet from top of coal chute, and having railing with about a ton and a half of coal fall on his lower extremities.

The fibula of the right leg was sticking out about two and one-half inches through the patient's underclothes, pants and overalls, when I first saw him in the ambulance en route to the hospital. Further examination under anesthesia showed tibia to be broken in four places, the middle third for about two inches being literally crushed. The fibula of the right leg was broken in two places, once in the middle third and the other about one-half inch above the malleolus.

I decided that it would be worth while temporizing with this leg in order to save it if possible. To do this I made an incision along the anterior surface of tibia about fourteen inches long, fully exposing the bone, and removed some twelve or fourteen small fragments, and with no other splint save a pillow, protected by sterile gauze and strapped with ordinary canvas strips to leg of patient, he was put to bed. The wound, after controlling hemorrhage, was packed with iodoform gauze soaked in a mixture of ichthyol, castor oil and balsam Peru.

This open and expectant plan of treatment was continued for about three weeks, after which time the sloughing, of which there was considerable, had ceased, and the wound found to be granulating nicely. I then had a fracture box made at a local machine shop, and continued same plan of treatment, except using the fracture box instead of the pillow. In seven months from date of accident, Mr. S. was able to leave hospital on crutches. The wound inflicted by right fibula was still open and discharging some pus. Several spiculæ of bone worked out through this wound during the next six months, but at the end of one year and six months from the date of injury, Mr.

S. resumed his occupation as a railroad conductor, and has continued to work steadily up to this time. He walks with a slight limp, but is active and capable. I have not mentioned the treatment of the left leg, because no complications worthy of mention developed in the treatment of same.

These two cases will suffice to show that one has plenty of latitude for originality and one's ingenuity is often taxed to the limit in the treatment of fractures. It also shows that only by constant personal care can we hope to obtain good results in the more complicated forms of fractures.

The two cases illustrate the point that it is very, very rare indeed that a fracture, or a complication of fractures, will require the amputation of the limb.

DISCUSSION.

Dr. Snodgrass (Little Rock)—I haven't anything to add to the paper. I wish to thank Dr. Foltz for his valuable suggestion. I believe if we follow his advice we shall all have some success. I think he is to be congratulated upon the results he got with the cases he reported.

Dr. Runyan (Little Rock)—One point I want to emphasize that I do not think the surgeon should ever overlook, and that is that you should never take charge of a case of fracture, no matter how simple, and assume responsibility if the patient should refuse to take a general anesthetic. I think that is one of the most valuable points brought out. In 99 per cent of cases you cannot tell definitely whether you have adjusted the fragments perfectly or not unless the patient is under a general anesthetic. I make it a rule to say to the patient before I undertake to take charge of the case at all, that it may be necessary for him to take a general anesthetic in order for me to be able to make an exact diagnosis and properly adjust the fracture. If he refuses to do that, I am very glad to step out and let somebody else take charge of the case, because, as the doctor said, this is the cause of more suits for malpractice than most any other line of surgery, and I, for one, am willing to let somebody else have the great majority of these cases.

In regard to the X-ray, there is a difference of opinion in regard to what the X-ray picture shows. I think that is for the most part due to ignorance on the part of the doctors looking at the pictures. An ordi-

nary doctor who has not had a great deal to do with X-ray work is not capable of acting as an expert, and he is not capable of interpreting what he sees. I believe that most real experts will usually agree on what they see; but the trouble is, people who are not experts are trying to act as experts. I think that is one point that should be emphasized.

Where we are not able to adjust our fractures, and where the X-ray shows under the dressing that the fragments are not properly adjusted, I believe in this case we are justified in doing, as Mr. Lane has recommended, cut down upon the fragments and properly adjust them and wire them together.

In regard to the treatment of fractures of the femur, I just like to say that I still use Buck's extension method of treatment, get good results, and have not any cause to change.

Dr. J. C. Amis (Fort Smith)—I think the subject of fractures is one that is of very greatest interest to all of us. And I have been very much interested in both the paper and the discussion of it. I like that last thought of Dr. Runyan's of cutting down on the fragments; I think that is a valuable one, especially in the fractures of the femur. I have seen cases where you have overlapping of the bones or fragments with muscular tissue or some other tissue between, that under the most perfect anesthesia, and the most perfect circumstances, as far as the patient is concerned, it will be impossible to bring the fragments in apposition. Dr. Cooper and I had such a case, and we made every effort to reduce the fragments of a fractured femur under anesthesia, and failed to get the bones in apposition, and I thought he had made a bold stroke when he made a good, long incision and went down and separated fractured ends and put them together, and if you could see that boy with his straight thigh running around Fort Smith, you would not think he ever had a broken leg, and you would say "amen" to the procedure. I take my hat off to him, and I feel glad every time I see the boy.

I am not very much afraid of an anesthetic. Dr. Dorr said we all have them to die. I never saw one that looked like he was going to die. In their last report the Mayos and their associates say they have given thirty thousand surgical anesthetics

without a death. So I think you ought to have an anesthetizer who knows his anesthetic. I do not care whether ether or chloroform be the one chosen. I would a whole lot rather have an anesthetist give me chloroform who knows chloroform, than one to give me ether who does not know ether. I want him to know his anesthetic. I want him to know his patient. I want him to give the anesthetic, and not be craning his neck trying to witness every step in the operation.

When I give an anesthetic—and I give it very frequently—I give it in this way. And as I think I know how to give it, I do not want Mr. Surgeon to have to bother telling me how to give it. If you understand your business and attend to it, you can take almost any kind of a fellow and give him an anesthetic, get your surgical anesthesia and straighten out his fracture. Here are the nightmares that confront the surgeon: These fractures, these old twisted clavicles, these short, crooked elbows, these deformed legs arms and thighs, these fellows walking around with their feet out, showing bad results.

I am not a surgeon now; I quit criminal practice several years ago (laughter and applause), but not so long ago but that I remember very well that the keynote of successful treatment is: get surgical anesthesia in every case of fracture; that is the secret of success. That is worth more than pulleys or splints or anything else to get him in condition for your first dressing. I will tell you this thing of fixing a Colle's fracture, or fracture of one or both bones of the forearm without anesthesia, and going off and leaving it, is not safe and it is not good surgery.

I had the prettiest kind of little girl break her forearm—fracture of both bones. I put on anterior and posterior splints and said she was alright. I went over the next morning to see her and she said she suffered no pain. She was still alright until she put her hand down and attempted to raise herself up from the sitting posture; the splint was a little too loose and the hand got out. We then took it off and it was as crooked as a dog's hind leg. I got Dr. Cooper to help me and we gave her chloroform and were able to straighten it out, and she had perfect results.

I believe, as a rule, all fractures ought to be attended to promptly, thoroughly and rendered painless by the use of an anesthetic. I believe you ought to keep your eye on all of them. They are treacherous things. I think it is a mighty good procedure to observe your patient each day for the first week very closely and change your dressing whenever it is loose or too tight, regardless of the time it has been on. If I had a fracture I would want the surgeon to do that for me.

Dr. Laws (Hot Springs)—I wish to have a word to say in regard to the treatment of fractures of the shaft of the femur. I believe, as Dr. Amis just stated, that the best treatment of that condition in cases that are good surgical subjects is the open treatment with the application of the Lane plate, because I believe anesthesia is alright in getting reduction. I believe it is absolutely important to reduce it thoroughly, but even after you get it reduced, holding it there. With these large muscles that are pulling antagonistically, I don't care what kind of extension or apparatus you employ, you are going to have a certain amount of shortening, and you are not going to have a perfect result. You may get functional results, but I believe the treatment of fracture of the femur, where the subject is in good condition or a good surgical subject, will be the open operation, and application of the open plate, and then a plaster cast or any other kind of splint that you might want to use.

Dr. Foltz—I do not know of anything further I wish to say. I want to thank the gentlemen for their very free and favorable discussion of the paper. If the suggestions offered met with your approval, I have accomplished the object of my paper.

There is one point brought out by Dr. Runyan in treating these compound comminuted fractures of the condyle of the humerus. If I had had the Lane splint, that is, the triangular Lane splint with the three prongs to it, I should have used it in that case, particularly after the X-ray showed unsatisfactory reduction in my first effort. But I did not have them. I had the other. I did not know where to get them, and did not use it on that account. I have them now, and I am sure, should I meet with another fracture of that kind, I will use the triangular Lane splint and keep it there until the fragments knit together.

ABDOMINAL INCISIONS FOR EXPLORATORY PURPOSES.*

By Charles S. Holt, M. D.,
Fort Smith, Ark.

A book could be written on this subject, but we prefer to be brief and make the book as small as possible. Hence, we purposely refrain from going into the details of minor technic and the enumeration of cases, preferring to call your attention for a few minutes to the more interesting branches of this subject.

As the years roll by we become more and more impressed with the idea that more antemortem incisions would mean fewer postmortems, fewer invalids and more prolonged lives. Let us realize the vast number of cases suffering from purely mechanical causes, that only an exploratory incision will reveal to us the condition. We should have the consent of the patient before operating, to deal with his pathology, according to our best judgment. Despite the development of laboratory methods as an aid to the diagnosis of pathologic conditions in the abdominal cavity, the source of the patient's disability is at times puzzling and justifies operative procedure for the exploration of the abdominal cavity and the subsequent removal of the trouble.

Dr. Chas. H. Mayo says: "An abdominal exploration is no more of an operation than cystoscopy of the bladder with ureteral catheterization in diagnosing kidney and bladder troubles."

One of the most misleading factors in locating diseased conditions in the abdomen is the subjective symptoms of pain. In listening to the patient's description as to the location of the pain, we frequently overlook the fact that no irritative impulses passing over the sympathetic nervous system are perceived while passing over that route. Pain is only perceived when the irritation is transmitted to the nearest connecting ganglia and nerve of the cerebro-spinal system, and it is then referred to the muscle innervated by that spinal nerve which arises from the same segment as does the sympathetic connection. The embryogenetic development of muscle being metameric, each metamor being a dis-

tinct unit possessing its own blood and nerve supply, the development of nerves is therefore also metameric, likewise the blood vessels that accompany them.

Since we have frequent anomalies of abdominal muscles, we do not find the seat of pain for distinct pathologic disturbances in the same anatomic region of each patient. The anomalies are frequently so misleading that some of our ablest surgeons, in making an incision for a gall-bladder operation, find that the pain was from a diseased appendix and vice versa.

A great many of us have had some patients die without knowing the exact nature of their disease. We probably did all we could, symptomatically, but despite our efforts with medical treatment, they failed to improve and died. After the postmortem, when we had located the seat of the trouble, we then reproached ourselves for having neglected to perform an exploratory incision which would have permitted a recognition of the condition, and enabled us to have saved the patient's life. We will not allow a patient with a complicated penetrating stab or gun-shot wound of the abdomen to develop a peritonitis or die of hemorrhage without opening the abdomen, suturing up the bowel or ligating the vessels. The only difference in these exploratory incisions and ordinary laparotomies is the matter of diagnosis, one to make a diagnosis, the other to confirm one already made; it follows that the technic of the operations remains the same. Hence, we will only emphasize the more salient features to be attended to in an exploratory operation.

In the preparation of the patient, the operator should exercise the strictest vigilance over his assistants, nurses and operating room, as to cleanliness. He should know how to "get in" and "get out" as quickly and carefully as possible, especially in emergent or imperative cases, such as gun-shot or stab wound, suspected typhoid, duodenal or gastric perforations, suspected tubal pregnancies, internal hemorrhages, ruptured pus sacs, and suspected bowel obstructions of all varieties. In some of these emergency cases the operator may find the patient suffering from such profound shock as to require a very light anesthesia.

Besides the emergency cases for exploratory incisions, we wish to mention, under the head of semi-emergency cases, all obscure

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and chronic gastric, intestinal or pelvic troubles pointing toward pyloric stenosis, perigastric, pericholecystic adhesions, and diseases of the gall-bladder, pancreatic and common duct troubles. In these semi-emergency cases we usually have time to give more attention to details regarding the general preparation of our patient and the general technic of the operation.

The bladder and bowels should not only be emptied before operation, but the contents of the bowels should be rendered as near as possible innocuous. This is best accomplished by previously feeding the patient on sterilized substances, articles of diet not prone to undergo bacterial decomposition, and the administration of intestinal antiseptics which inhibit the activities of the intestinal flora.

If we have a severe infective process, and suspect a suppurative cholecystitis, salpingitis or other purulent inflammatory condition, it might be well to stimulate an artificial hyperleukocytosis by subcutaneous or peritoneal injections of albumoses, bullions, nucleic acid, etc., or by Wright's method of vaccines of bacteria from whose infection the patient is suffering.

In making our incision we must remember and understand the significance of the bony landmarks as well as the anatomic anomalies that are apt to occur:

(1.) The external oblique is aponeurotic to a line extending between the anterior superior spines of the ilium, a fact which, if unknown, may lead to confusion in the identification of the respective tissues. (2.) The linea alba is broad over the umbilical region and narrow below. (3.) The borders of one or both recti are usually exposed in a median incision below the umbilicus. (4.) The pyramidalis may be absent on one or both sides, double on one side, or absent on the other and frequently overdeveloped on one or both sides, due to the occupation of the individual. (5.) The notch at the upper border of the pubic junction is the bony guide to the median line at that situation in the normal pelvis. (6.) The semilunar linea lies at the outer border of the rectus and extends in a curved direction from the tip of the ninth costal cartilage to the spine of the pubis and opposite the umbilicus, and usually about three inches from the median line in the normal adult abdomen. Attention must also be given

to the condition of the abdominal cavity, for if the cavity is distended the distance is increased, as is also the width of the linea alba and the spaces between the recti below the umbilicus. (7.) Difference in the direction of the fibers composing the abdominal wall and the presence of associated fascia, the opacity and density of the fascia transversalis, the loose, fatty texture of the subserous, and, if normal, the translucent and highly vascular peritoneum should be noted for obvious reasons. (8.) The fact that important anterior branches of the dorsal and lumbar nerves run obliquely downward and forward between the muscular planes of the abdomen which they supply, should not be lost sight of. We should bear in mind that their severance is followed by a greater or less loss of power of the muscles to which they are distributed. The incision should be made as nearly as possible over the seat of the trouble. In selecting the site of our incision we should try to obviate such sequelae as hernia and disfigurement, etc. The modified incision is preferable in suitable cases.

Some operators modify the median incision so as to carry it to the right or left, in order to evade to a greater or lesser degree the rectus, as the fibers of this muscle, as well as the posterior part of its sheath, offer substantial support to the underlying vulnerable points not possessed by the median line incisions under similar circumstances.

The length of the incision is also of importance. If too short, it will prevent proper examination and unduly prolong the operation. If too large, needless exposure and escape of the abdominal contents will happen. However, it is preferred to at first make the exploratory incisions short and increase them in size as circumstances may require. Aimless manipulation and unnecessary stretching of tissue must not be practiced.

In cases of gun-shot or stab wounds the whole of the canal should be carefully inspected throughout for perforations and hemorrhage; in fact, all pathologic conditions present should be attended to. Adhesions should be treated according to their density, length, vascularity and nature of the adherent surfaces. Just as important as the breaking up of adhesions during the operation is their prevention. Serous coverings of viscera

should be treated with great care, otherwise the covering will be stripped off, depriving a circumscribed area of the intestinal wall of its nutrition, producing sloughs, followed by peritonitis, necrosis, fistulae and the formation of adhesions. If exposed unavoidably, they should be repaired. The operator should avoid the irritation of serous surfaces by chemicals.

Hemorrhage before or after closing the abdomen is of profound importance. All bleeding points should be tied and oozing arrested at once. In case the hemorrhage for the control of which the operation has been undertaken, is due to omental oozing, it is best to ligate and remove at once the omentum containing the bleeding area. After hemorrhage has been controlled it is always best to restore the patient to the dorsal posture, and to permit the return of the viscera to their normal relation. Blood, urine, bile, fecal matter, diseased and septic products should be removed from the peritoneal cavity with the greatest of care. While a considerable amount of blood may be absorbed and prove harmless under favorable circumstances, yet even the smallest amount may become the source of septic infection, especially if infecting influences such as a ruptured tube, suppurative gall-bladder, a gangrenous appendix, remnant of clothing, etc., be present.

If we should be assured of the absence of infection, and of the nonproduction of irritating products in the peritoneal cavity, drainage could be dispensed with. However, since the majority of exploratory incisions are made for the location and removal of pathological products, and since we have great difficulty in the removal of the infectious elements incidental to the presence of pus, the employment of drainage becomes a necessity in many cases.

The drainage to be employed should be suitable to the needs of the condition to be relieved. All material suitable for drainage purposes may be employed, and the drainage agents should extend from the infected areas by the shortest practical route to the outside of the abdomen. The outer ends of the drainage agents and the opening transmitting them are a constant menace to sepsis, therefore they should be protected by an abundance of gauze, which will at the same time materially aid the function of drainage. Gauze drains should be twisted

vigorously before removal is attempted, and even then the removal is quite painful. When gauze packing is employed to arrest hemorrhage, it should be introduced first around the outer border of the bleeding area, thence toward the center, thus permitting of its easy removal. A thin sponge or a broad gauze wiper should be placed on the abdominal contents before closing the wound, to prevent the escape of the intestines and absorb such fluid and blood as may come in the way.

Two methods of closing the borders of the wound are practiced. One in which certain tissues are joined independent of each other and called tier sutures, and one in which the borders are joined as a whole and called suturing *en masse*. The final outcome of the two methods is of importance. The first is said to result in 6 per cent of hernias and the latter method is credited with 10 per cent. Be sure, before completing the suturing, to expel the air within the peritoneal cavity by pressure along the borders. In placing the sutures, it should be borne in mind that the borders of the fascia retract considerably on division, and when they remain unnoticed and ununited, contribute greatly to serous adhesions and hernial consequences.

Present-day surgery, with its septic detail and perfected technic, as outlined in this paper, permits of exploration of the abdomen in more cases than was possible to employ in the olden days of surgery. In all penetrating gun-shot and stab wounds there should be no delay in undertaking an exploratory operation of the abdomen, if we expect to save the life of the patient. Since we do not hesitate in case of mastoid trouble to make an exploratory incision and clean out the mastoid cells, why should we hesitate in a case of suspected ectopic gestation to open the abdomen by an exploratory incision, inspect the pelvic organs and remove the cause of the trouble? An exploratory incision of the abdominal cavity, if done under aseptic conditions, and with a correct technic, is fraught with no more danger than is the opening of the mastoid cells. Why should we neglect in the case of the abdominal cavity, that which we always prefer to do in the case of the mastoid, since the danger of operation in the one is no greater than in the other? Ever let our motto be, "*Do not procrastinate.*"

INGUINAL HERNIA.*

By H. H. Kirby, M. D.,
Little Rock, Ark.

The title of this paper is inguinal hernia; however, the name given in the program is entirely appropriate, since there is only one real cure and that is by operation.

It seems that this is an opportune time to write a paper upon this subject, for so many advances in the surgery of hernia have been made within the last few years, and this prevailing spirit so full of opportunities should be an incentive to the betterment of the present conditions, for there continues to be within our State an apathy regarding such cases. They are allowed to go along inconvenienced by unnecessary harness, in constant dread of some complication, or suffering as a result of these complications, and in many cases having their lives shortened by them, and all because of the inactivity of the doctors, for every inducement can be offered for the alleviation of the trouble. The obsolete and inefficient methods of the past have been supplanted by the rational and very successful procedures of the present, and every hope can be given the unfortunate thus afflicted.

Many of the fears of the past among the laity have come to the present because of this inadvertence. That these should be corrected should be the aim of each one of us, and the sooner the better, for timeliness and thoroughness of intervention are very important considerations.

Inguinal hernia is a protrusion of some viscera through the inguinal canal. It is classified in many ways; direct and indirect, partial or complete, congenital or acquired; or clinically, as reducible, irreducible, inflamed, obstructed and strangulated—the last being the gamut of the hernial funeral march.

There is really only one form of inguinal hernia, and that is the congenital type, an error in development, and in a large per cent of cases an hereditary condition. In one form—the oblique—there is a patent process of peritoneum, in the other a weakness of the muscular structure and most probably a preformed sac. In this case the muscular weakness would be the result

rather than the actual condition. This latter form, the direct, is very rare, forming less than two per cent of the cases. Considering these from the embryologic standpoint, we are enabled to explain all the different types.

The testicle after its formation and separation from the Wolffian body undergoes a displacement and comes to lie on the brim of the pelvis, being drawn down by a muscular band. The same condition obtains with the ovary. However, in most cases it retains its position until enlargement of the pelvis causes it to sink to its definitive position. The fold that causes the descent of these organs is the *placa gubernatrix*, which passes to the groin, where a thickening is formed which includes the fibers of the *transversalis* and *internal oblique* muscles, the *transversalis fascia* and *peritoneum*. This begins to grow outward, eventually forming the *scrotum* and drawing these various structures into it. The process of peritoneum thus formed being the *processus vaginalis*. When this condition is presented the *gubernaculum testis* comes to lie posterior to the sac and begins to shorten, drawing the testis into the scrotum, and in some cases the ovary, producing the herniated ovary always with a patent *processus vaginalis*. This very briefly describes the rationale of hernial development.

In all hernia there may be variations from this congenital type as a result of the many extrinsic and intrinsic influences to which they are subjected, and one might be led to believe the hernia acquired since they so frequently follow muscular strain or weakening of the wall. Or the time of the appearance may lead to the same conclusion, for many herniae do not appear until adult life.

In many of the cases diagnosis will be arrived at by sight alone. However, in some of the less pronounced forms the utmost skill may be required. A swelling beginning at the site of such hernia, that is, midway between the symphysis and anterior superior spine of the ileum and above Poupart's ligament, replaceable and recognized as omentum or intestine, and when a clear determination of the tract can be made is easily diagnosed. If in addition increased abdominal pressure raises the tension or coughing gives an impulse, the diagnosis is still more certain. If the contents cannot be replaced,

*Read before the Thirty-fifth Annual Session of the Arkansas Medical Society, at Fort Smith, May 3-6, 1911.

increased muscular pressure will enlarge the mass and palpation will frequently result in a recognition of the contents, the intestines being smooth, tympany sometimes being elicited. This varying with the contents and the secondary changes in the sac. The omentum is sometimes recognized by its elasticity, consistency and nodular feel. If reduction is possible the intestines always pass out first, the omentum being replaced with difficulty. To differentiate the oblique from the direct form, place the hand over the internal ring and have the patient strain. If the hernia appear it is direct and has little or no tendency to enter the scrotum.

To consider the diagnosis of all the complications of inguinal hernia would too far extend the limits of this paper. The diagnosis of its presence alone should be all that is necessary to determine the course to pursue. Complications should not be allowed to arise since the advent of such improved technic and sane methods.

The only treatment that will give a permanent cure, except in the very young, is operation, and in these cases the time should not be delayed beyond the eleventh month since the changes in the habits of the child necessitate freedom from such incumbrances, for rapid anatomical changes are taking place on account of the child assuming the erect position. To allow the child to pass through adolescence with such a condition is criminal. They will be backward both mentally and physically at a time when they should be most able to map out life's career. The percentage of cures in these two classes is almost 100 per cent, the mortality under 25 per cent.

The most logical operation is Ferguson's, modified by the Bassini, and Andrew's imbrication methods. It is the method used by nature in making normal man, and nature is a good mechanic. Instead of the curved incision, the straight seems preferable to me. Beginning one and one-half inches internal to the anterior superior spine of the ileum, make an incision parallel to and one-half inch above Poupart's ligament, ending internal to the external ring. Next cut through the external oblique aponeurosis parallel to its fiber, beginning at the external ring and reaching almost to the anterior superior spine of the ileum. Pick up the sac at the internal ring, raise it, remove its fascial covering either before or after opening

it. Divide strictures, if such exist, note contents, if any, and treating them according to their condition. The sac is then drawn out, ligated and excised, the stump being allowed to fall back. This is the most important step in the operation. Care must be taken that there are no adhesions between the peritoneum at the internal ring and the transversalis fascia, as the fascia is really the most important structure in the prevention of recurrence. The opening in this is then lessened by a few sutures. The internal oblique is drawn down and sutured to Poupart's ligament, not making the closure too tight or splitting Poupart's ligament. The external oblique and skin are then sutured, absorbable sutures being used throughout.

The patient should be kept in bed three weeks, for this is the time it takes to make a firm union of connective tissue from fascia. If the muscles were depended upon to do the holding, three months would be required, as this is the time taken for firm union to result in the connective tissue of muscles. And to insure the best possible results precaution should be taken for this length of time.

REPORT OF A CASE OF SPLENECTOMY.*

By Preston Hunt, M. D.,
Texarkana, Ark.

The case I wish to submit for your consideration is that of a young lady who was injured by a 32-calibre pistol ball on November 1, 1910, the missile entering the abdomen in the median line, one-half inch below the apex of the xiphoid cartilage. I reached the patient about forty minutes after she was injured, and found her lying upon the ground, very pale, and pulseless at the wrist, and in a deep state of shock. Her partially digested breakfast, eaten about ninety minutes previously had been vomited, together with an admixture of considerable blood.

The patient was removed by ambulance to the Pine Street Sanitarium and immediately placed upon the operating table. Upon opening the abdomen, which was accomplished by making both a linear and transverse incision, I found the bullet had punc-

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tured the anterior wall of the stomach at about the junction of the middle and left third of this organ, and made its exit from the gastric cavity at the fundus just below the junction of the esophagus with the stomach wall proper, thus producing two perforations in the gastric wall, passing through the spleen, perforating the diaphragm, penetrating the inferior part of the lower lobe of the left lung, passing between the eighth and ninth ribs and lodging beneath the skin, from where it was removed under cocain five days later.

From the course and direction of the bullet, I am of the opinion that it passed through the pericardial sac, perforating either the left or posterior segment of the pericardium. On this fact, however, I cannot speak definitely. I closed the perforation in the anterior wall of the stomach with Czerny-Lembert sutures, using chromic catgut for the deep and silk for the superficial sutures. The puncture at the cardiac orifice was closed by taking a purse-string suture with small chromic catgut in the muscularis of the wall and finishing by closing the rent in the serous coat. Both openings in the serous coat were closed and reinforced by a double row of silk sutures, the last burying the first. I next gave my attention to the spleen, which I found to be so badly damaged that I deemed it better to remove it entirely than to undertake to control the hemorrhage. The vessels of this organ were clamped *en masse* close to their entry into the spleen and severed beyond the clamp with scissors. The vessels were ligated with silk and eatgut and released from clamps. After examining for further punctures in the alimentary tract, and making a local toilet of the abdominal cavity, the incision was closed by layers, without drainage.

On the third or fourth day the patient developed an elevation of temperature, and upon investigation I found that the serous and pleural cavities were both infected. I made a small opening into the abdominal cavity through the original transverse incision, and secured pretty free drainage. Pus continued to discharge rather copiously for ten days, after which time I allowed the wound to close by granulation.

The patient vomited quite a quantity of partially digested blood six hours after she left the operating table. About six days after this operation the patient complained

of considerable colicky pains in the abdomen and frequent desire to evacuate the bowels, and at each movement she would pass partially degenerated blood, together with pus and mucous, indicating that an abscess cavity containing pus and blood had ruptured into the alimentary tract at some point. This complication subsided after thirty-six hours.

Blood examination made by Dr. Klein four weeks after the operation disclosed a total count of forty-five thousand leucocytes to the cubic millimeter, with eighty-five per cent of polynuclear cells and forty-five per cent of hemoglobin. The patient was put on a treatment of "I. Q. S. A." and black pepper for four days, when another examination of the blood showed that the hemoglobin had increased to eighty-five per cent of the normal. Examination at present reveals ninety-five per cent hemoglobin, with 3,800,000 red blood cells and 13,000 leucocytes.

As to what influence the removal of the spleen will have on the longevity of this girl's life, I cannot say. I wish to say, however, I know of no function performed by the spleen beyond embryonic life that cannot reasonably be carried on by the remainder of the glandular system, and as this patient is now enjoying perfect health with her blood about normal, and weighing six pounds more than when she was hurt, I confidently expect her to live out her natural expectancy, and in this belief I am supported by the latest investigators.

In conclusion I will say that I began giving water by the stomach on the third day, liquid nourishment on the fourth day and semi-solid food on the eighth day after the operation.

I am indebted to Dr. Fuller for assistance rendered in this case.

AN UNUSUAL CASE OF THYROID OR PARATHYROID GOITER.*

By R. C. Dorr, M. D.,
Batesville, Ark.

I shall just give you a brief report of this case without comment.

Miss Pearl M., of Moorefield, Ark., age 26, family history negative, white, dark complexion. Five years ago she noticed a tu-

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mor low down in the posterior triangle of the neck. One year ago noticed a small tumor on top of this. Two years ago noticed tumor on left side of neck, in the anterior triangle. This tumor connected with the left lobe of the thyroid gland.

Tumor on right side was freely movable, and did not connect with the trachea, thyroid or esophagus. Size of tumor was two by two inches. The symptoms of goiter were negative, as far as the eye, heart, digestive organs or nervous system were concerned.

On December 6, 1910, I operated the tumor on the right side, under novocain and adrenalin, feeling sure that I was not operating on a goiter. As soon as I got down to the tumor I discovered that I was wrong in my diagnosis. The tumor proved to be a pedunculated cystic tumor containing colloid material with main vessels in the pedicle. I did not remove the small tumor for fear it was a parathyroid.

After removal, the patient had a typical case of hyperthyroidism, temperature 101, pulse 140, which declined on the third day. The post-operative treatment was the same as that laid down by leading authorities.

Dr. W. S. Baldwin's report was that it was tumor of the thyroid.

The following is Dr. Manglesdorf's report in full:

Am returning to you four stained sections made from specimens submitted by you. It is no easy matter to take a small piece of an unknown structure and determine positively what it is, especially when it is pathological. Of course, the various organs have some characteristic structure, but these again do not give the same picture on the stained section; every angle of the cut of the knife gives a different view. The specimen which you submitted was a glandular structure, and it is my opinion that it is either thyroid or parathyroid gland.

Slide No. I is stained with eosin-haematoxylin, showing the enmeshed erythrocytes and the single layer of cuboidal cells lining the vessel walls.

Slide No. II is cleared with acetic acid, throwing out the red blood cells and colloid material.

Slide No. III is stained with picric acid-fuchsin, showing the colloid material and protoplasm of cells yellow, while the fuchsin has stained out the capsule and connective tissue (showing the characteristic elastic fibres very seldom found in any other gland capsule).

Slide No. IX is stained with haematoxylin acid-fuchsin, picric acid, showing the colloid material brick-red, while the trabeculae from the capsule are a deep violet.

Patient left the sanitarium on the eighth day, and made an uneventful recovery.

SURGICAL TREATMENT IN TRACHOMA.*

By Robert Caldwell, M. D.,
Little Rock.

When we consider that about 60 per cent of all patients admitted to the State Institution for the Blind are admitted as a result of trachoma, and recall the fact that there are numbers of trachomatous blind in the State, engaged in divers trades and occupations, some begging, selling pencils, singing on street corners, etc., and also that there are hundreds of cases unlisted that are either taking treatment, or, having been temporarily benefited, are resting in a state of quiescence, only awaiting a future attack, I believe it would not be inappropriate to bring this subject before this society for discussion. It is the hope of benefiting some of these unfortunates and preventing the same sad conditions in others that impels me to attempt to write on the subject of the surgical treatment.

We know that trachoma is infectious, but we have no exact knowledge as to the nature of the infection. We know there is intense papillary hypertrophy of the conjunctiva of the lid with the development of trachoma granules. If, by some specific treatment, we could dispel the granulations and permanently relieve the papillary hypertrophy, we would all but have accomplished a cure. But later, when the granules are gone, the connective tissue of the conjunctiva remaining contracted, a scaphoid-like condition of the cartilage and scar tissue formed, we have an entirely different process to combat.

In the stage in which the granules are numerous and large, or in which a papillary hypertrophy is present, especially where we have the sago seed-like look of the conjunctiva, I know of nothing that has given me better results than a thorough rolling with Knapp's roller forceps. To do this operation thoroughly, as it always should be done, I anesthetize my patient with ether. I then catch the upper lid at the free border by means of a hemostatic forceps, roll the lid well out, so as to expose the retro-tarsal fold,

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then by means of Knapp's forceps roll out all granulations by successive little picks with the forceps. After I think I have done this, I dry the conjunctiva with cotton, previously soaked in bichloride solution, then milk the area well with Prince's forceps. I now examine carefully to see if any granulations have been left, and if any are found I repeat the rolling until none are perceptible.

Thorough work here has more to do with the results in the operation than any other point in the rolling. I now remove the hemostatic forceps and proceed to roll the remaining conjunctiva of the lid, which can easily be done by simply everting it. I use the same care and thoroughness here as in the cul-de-sac. We are far less liable to leave untouched granulations here than elsewhere, therefore this part of the operation is much more easily done. I always take the utmost care not to damage the cornea while rolling the upper lid.

Having satisfied myself that I have removed all granulations from the upper lid, I now proceed to the lower lid, which I evert by pulling down with the left hand, at the same time having an assistant push down on the eyeball, which pushes out the lower retro-tarsal conjunctiva; then by means of Knapp's roller forceps first, and Prince's forceps second, I milk out all granulations of the lower lid.

After I have rolled the lids to my satisfaction, I apply a 1-to-500 bichloride solution to the everted lids by means of cotton on an applicator, and immediately wash them off with normal saline solution. I then immediately put the patient to bed, and as soon as he has revived from the anesthetic I apply iced cloths for thirty minutes at a time, every two hours, for the next two or three days. After the rolling I do not hesitate to keep up appropriate medical treatment until the conjunctiva is negative.

The subsequent treatment of these cases is very important, in that we are liable to have synblepharon form between the ocular and palpebral conjunctiva if the lids are not separated well into the cul-de-sac, above and below. For that reason I attend to the case once a day myself, and be sure that I separate the two conjunctival layers from each other each day for at least four or five days. So much for the treatment of the granular cases of trachoma.

In the cases that are evidenced by an hypertrophied condition of the conjunctiva, not showing granulations, I am content to massage the hypertrophied conjunctiva well, by means of cotton on an applicator and filled with boric acid, after dropping a few drops of 4 per cent solution of cocain in the eye at intervals of five minutes, for two or three times. I oftentimes think that the results we get in these cases are due to the inflammation set up by the irritation of massage.

Taking a case of trachoma accompanied with severe acute symptoms in an adult, swollen, thickened, reddened upper lid, with or without granulations, accompanied with photophobia and blepharospasm, I oftentimes get excellent results from external canthoplasty. I think the drainage here has a great influence in relieving the irritated condition of the conjunctiva and thereby helps to protect the cornea from subsequent involvement.

But not in these cases do I get the best results from external canthoplasty. In the old cases of sub-acute or chronic trachoma, where we have cicatricial tissue formed on the upper palpebral conjunctiva and a boat-like contraction of the lids making, as the people call, a small eye, this most likely accompanied with trichiasis and very often pannus of greater or less degree. The scar tissue that has formed under the upper cartilage has, by contraction, drawn in toward its center the borders and end of the cartilage, producing the scaphoid-like condition.

If the external canthus is split, the lids are given a chance to open more widely, and if we have done the canthoplasty correctly, and have cut the external palpebral ligament, we relieve the pressure on the eyeball and at the same time give some help toward everting the borders of the lids, thereby lessening the irritation from the so-called "wild hairs."

In doing a canthoplasty, I use straight scissors, cut well out and deep, grasping in my scissors the external angular process, skin and conjunctiva, then cut; and as my scissors cut over the bone they separate all tissues in the external angle of the eye. Then, by means of an angular keratome, I separate the skin from the conjunctiva and separate the external palpebral ligament. This I consider the most difficult, yet most important, part of the operation. By pulling up on the upper lid and cutting the ligament while the lid is on the stretch, we can

feel the lid give way as the ligament is cut. The same will happen with the lower lid. I then take one stitch from conjunctiva to lid below, and two above, having the patient look to the opposite side while tying the last stitch so as not to get too much tension on the conjunctiva. Directions for doing this operation can be found in any good book on ophthalmology, but according to my mind very few of them lay sufficient stress on the method of clipping the external palpebral ligament.

For the cases that have gone on so far that the trichiasis is very troublesome to the patient, I do an entropion operation. But very seldom do I do an entropion operation until I have done the canthoplasty and the eye has gotten well from this operation. I believe most of our failures in the entropion operation are due to not doing the canthoplasty first.

I do a thorough entropion operation by first splitting the lid border between the skin and mucous membrane, being sure that all hairs are left on the skin side. I make the incision about one-eighth to one-quarter of an inch deep, then make an incision on

the external surface of the lid through skin and subcutaneous tissue and into cartilage the full length of the lid, then I make a second incision 2 m.m. from the free border of the lid and parallel to it above a sufficient extent, depending on the amount of eversion I desire. I make this incision join the first at each end. I always make this V-shaped incision extend into the cartilage, and remove a V-shaped section of the cartilage. I then take from three to five sutures, entering into the lower section of the skin and coming out through the upper section of the V-shaped cartilages and upper section of the skin. By tying in this position, I anchor the lower border of the skin of the lid to the upper border of the cartilage, and at the same time bring skin to skin, producing a V-shaped opening in the lid border where I make my first incision, which can be grafted or left alone to granulate. I have seen a great many operations for entropion that have been failures, and since a second operation for entropion on the same eye is not an enjoyable operation, I insist very much on doing the operation thoroughly, if we do it at all.

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All communications to this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the State. Notice of deaths, removals from the State, changes of location, etc., are requested.

ADVERTISING RATES.

A schedule of rates will be furnished upon request.

CHANGE OF ADDRESS.

Change of address will be made if the old as well as the new address be given.

ANONYMOUS COMMUNICATIONS.

No anonymous communications will appear in the columns of this Journal, no matter how meritorious they may be.

NOTICE.

All changes of address should be sent to Dr. C. P. Meriwether, secretary of the State Society, as he furnishes the mailing list each month of our members. All communications for publication should be sent to the editor not later than the 5th of each month.

Editorials.

THE SANITARY PRIVY.

In *Public Health Reports No. 54*, Lumsden, Roberts and Stiles describe "An Apparatus for Use in Safe Disposal of Night Soil," which should receive serious study by physicians and people. Outside of sewered cities the sanitary disposal of night soil is one of the most important problems connected with municipal government, and if the apparatus herebelow described fulfills the requirements of a sanitary privy, it should have wide endorsement by the small towns in the State. We have seen practical demonstrations of the apparatus, and unqualifiedly commend it. The description of the apparatus is as follows:

"*Construction.*—The apparatus under consideration consists of the following parts:

1. A water-tight barrel to be used as a liquefier.

2. A covered water-tight barrel, can, or other container to receive the effluent.

3. A connecting pipe about two and one-half inches in diameter, about twelve inches long, and provided with an open "T" at one end, both openings of the "T" being covered by wire screens.

4. A tight box, preferably zinc lined, which fits tightly on the top of the liquefying barrel; it is provided with an opening on top for the seat, which has an automatically closing lid.

5. An anti-splashing device consisting of a small board placed horizontally under the seat and one inch below the level of the transverse connecting pipe; it is held in place by a rod, which passes through eyes or rings fastened to the box, and by which the board is raised and lowered. The liquefying tank is filled with water up to the point where it begins to trickle into the effluent tank.

As an insect repellant a thin film of some form of petroleum may be poured on the surface of the liquid in each barrel.

Practical Working of the Apparatus.—When the privy is to be used, the rod is pulled up so that the anti-splashing board rises to within about one inch below the surface of the water. The fecal matter falls into the water, but this board prevents splashing, and thus meets one of the greatest objections thus far raised to the wet system. After defecation the person sinks the anti-splashing board by depressing the rod, and the fecal matter then floats free into the water. We are now working on an improvement whereby the rod will connect with the automatically closing lid, and the anti-splashing board will rise and sink as the lid is opened and closed.

Although some of the fecal matter floats, it is protected both from fly breeding and fly feeding, in the following ways: First, by the automatically closing lid; second, by the water; third, by the film of oil; and fourth, for additional safety, the apparatus should be located in a screened place. The film of oil also prevents the breeding of mosquitoes in the barrel. Accordingly, so far as the privy as a breeding or feeding place for flies and mosquitoes is concerned, the model in question completely solves the problem.

The fecal material becomes fermented in the water and gradually liquefies; the addition of excreta naturally raises the level of the liquid, and the excess flows into the ef-

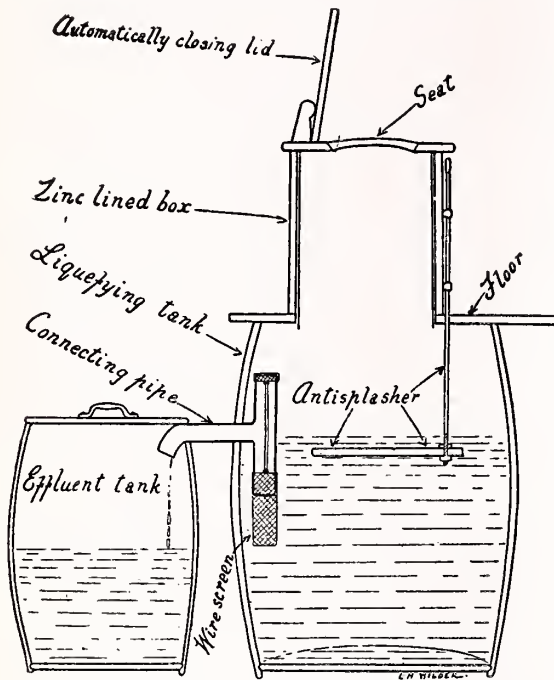
fluent tank, where it is protected from insects by the cover and by the film of oil. This effluent may be allowed to collect in the tank until it reaches the level of the connecting pipe, when it may be safely disposed of in various ways to be discussed later.

From July 12 to October 26 there have been 246 defecations (with urination) into the model in question, making about two and one-third defecations a day. The effluent has amounted to about twelve gallons of a manageable fluid. It has not been found necessary to add water to the liquefying barrel since the apparatus was put into operation.

Although the period in question included the hottest part of summer, the odor when compared with that of the average privy has been negligible.

It is thus seen that this device appears to meet the following requirements:

1. It solves the fly and mosquito problems, so far as the privy is concerned.



2. It liquefies fecal matter and reduces its volume so that it may be safely disposed of more easily and cheaply than night soil.

3. It reduces odor.

4. It reduces the labor of cleaning the privy and makes this work less disagreeable.

5. It is of simple and inexpensive construction.

The effect of the fermentative changes in the apparatus upon the viability of typhoid bacilli and hookworm eggs has not been de-

termined, but other experiments tend to show that under such conditions the vast majority of typhoid bacilli and of hookworm eggs introduced would die within six weeks' to two months' time. While the time of storage can be prolonged according to the capacity of vessels provided for the purpose, we believe at present that it is safer and more practical not to depend upon storage alone to destroy infectious organisms in the effluent, but to consider the effluent infectious and to dispose of it accordingly.

Diagnosis of Effluent.—(1) Heat: If a suitable (metallic) vessel is provided to receive the effluent, a fire may be built under the vessel and the effluent heated to boiling. Or if a wooden or concrete effluent tank is used, the effluent may be transferred to some other vessel for boiling.

After boiling, the fluid may be safely used for fertilizer under any conditions.

Heat disinfection is the only measure which can today be recommended unreservedly.

(2) Burial: Burial will unquestionably decrease the dangers of spreading infection, but in the present state of our knowledge this method of disposal cannot be relied upon as safe. If burial of the effluent is practiced, the fluid should be disposed of not less than 300 feet from and down hill from any neighboring water supply and not less than two feet underground, and then only provided the soil itself is a good filter. Burial in a limestone region may contaminate water supplies miles away.

(3) Chemical disinfection: Chemical disinfectants, such as chlorinated lime and certain coal-tar derivatives, have the great advantage of cheapness and can be relied upon to destroy pathogenic bacteria. Our knowledge regarding the action of chemical disinfectants upon the eggs and spores of the various animal parasites is at present very rudimentary, but so far as results are known, their practical use does not seem to be so efficient in the destruction of the zooparasitic as of the bacterial infectious organisms. Therefore, pending further investigations, the use of chemically treated excrement as fertilizer should not be regarded as unqualifiedly safe.

(4) Chemical disinfection with subsequent burial: Inasmuch as chemical disinfection can be relied upon to destroy pathogenic bacteria, and inasmuch as burial greatly reduces the danger from animal parasites, a suitable combination of the two methods (chemical

disinfection and burial) can be used with reasonable safety.

(5) Sewers: In partially sewered towns, the effluent from these privies may be emptied into the sewers. If conditions are such that the addition of this material to the sewerage is dangerous, then the entire sewerage system needs correction.

—Only toilet paper so far has been used, and the septic action seems to digest it. Other experiments indicate that newspaper would be disposed of by septic action in the tank, but perhaps some increase in the size of the tank would be required.

Cleaning.—Although no water had been added since the model was put into operation, the contents of the liquefying tank have remained fluid, and it is probable that in a tank having the capacity of an oil barrel, the amount of sludge from the dejecta of a family of five people would not be sufficient to require the cleaning of the liquefying tank oftener than once in six months to a year.

Further Experiments.—At present our studies are taking the following general directions:

While the barrel as the liquefying tank doubtless will be found to be the most feasible in many localities, it seems probable that tanks made of concrete or other durable material will be more satisfactory in certain instances, and we are now having concrete models built.

We are also planning the construction of a series of privies of this type, all of which shall connect with a common effluent pipe so as to have one common effluent tank. A system of this kind appears to be of special applicability to small villages, such as cotton mill settlements. The effluent tank would be at the lower end of the row, and should be attended to by the proper authorities.

A third line of study is being made with a view to determining the possibility of utilizing safely the effluent for economic purposes. The effluent tank can be filled with gravel and soil, and possibly some plant may be found which will be able to grow in this material, perhaps thus safely utilizing the fecal material as fertilizer. If a suitable plant can be found, it is clear that the labor of disposing of the effluent will be eliminated, and if the plant is of economic value, one, for instance, which could be used as food for live stock, an additional inducement can be offered to the farmer to live a more sanitary life.

The device should be regarded as being still in the experimental stage, but so far as the experiments have gone the results are promising and indicate that with some modification of details to meet different conditions the apparatus may have a wide range of usefulness.

A SUGGESTION.

Now that the hot weather has quit sizzling, and a cooler temperature is promised, it is time that county medical societies should begin to lay out plans for scientific work during the winter months. Most county societies drag along through the summer, and they could be excused for such delinquency, but there is no reason why, with the delightful weather which will prevail for the next six months, each county society should not rejuvenate itself and inaugurate interesting programs for discussion. There are many live and important subjects which could be discussed with great profit, all bearing directly on the scientific as well as the business side of the profession.

We suggest that the following subjects be included in arranging programs, symposia being arranged to cover and bring out every phase of the subjects:

1. Pellagra.
2. Cerebro-spinal Meningitis.
3. Uncinariasis.
4. Acute Polio-myelitis.
5. Salvarsan.
6. Tuberculosis.
7. Pneumonia.
8. The Exanthematous Diseases.

PELLAGRA IN ARKANSAS.

That pellagra upon future investigation will be found to be one of the most common diseases of this State, only behind malaria and uncinariasis in frequency and distribution, is the opinion of many practitioners who have become familiar with the disease and its symptoms in the last two years. In our opinion there is not a county in the State but that harbors a score or more of frank and easily diagnosed cases. In the investigations now being made by the State Board of Health into hookworm conditions, many cases of pellagra have been discovered, although no special efforts have been made to gather any statistics of the disease. Harris, of Georgia, estimates that not less

than fifty thousand cases exist in that state. If this be true, and there seems no reason to doubt the statement, then Arkansas having the same class of people, the same character of soil, similar water supplies and general topographical conditions, we may expect an alarming number of cases to be found. Every physician in this State should at once begin to familiarize himself with the disease and its symptoms, and undertake a systematic study of all cases. There are some points which should be especially investigated with regard to this study, namely, *prevalence and geographic distribution, local geographic distribution, seasonable influences, meteorologic and telluric influences, topographical distribution, economic and hygienic conditions, food supplies, the relation of the disease to water, age incidence, race and nationality, occupation, heredity and contagiousness.*

One question to be determined: What is the cause? Is it due to maize, as the "zeists" claim, or is it due to some other cause, as claimed by Sambon? Pellagra is one of the most serious diseases prevailing in this State, and it is possible that its mortality rate will be found to be higher than that of any other disease.

We would urge each county society to appoint a special committee for the purpose of investigating this disease, and bring the result of their investigation before the Hot Springs meeting next May.

Miscellaneous.

IRREGULARITIES AMONG PHYSICIANS

The traffickers in human lives and unfortunates must be stripped of their pseudo-ethical shield so that they may be known and recognized by the public. These, though comparatively few in number in some communities, are too great in all to be permitted to associate with the grand and noble, ever-ready and never-failing, unselfish and self-sacrificing body of general practitioners and specialists. A membership in this organization should be a certificate of manhood, of scientific attainment, of moral stamina and of loyalty to the principles of the Golden Rule, the basis of ethics of the medical profession.

This association is called on by the public to relieve this situation. It relies on the justice and humanity of the cause. It relies

on the power and response of your conscience when awakened. It relies on your love and devotion to your fellow-men. It relies on your integrity and sense of duty to your commonwealth, to your profession and to the people to exterminate these evil practices. It is not sufficient for the profession of today to make great scientific advancement. It is our obligation to pass our untarnished traditional ethics in their highest sense to the succeeding generation, because it is only under the guidance of these basic principles of equity that the coming generation can accomplish the greatest good for the greatest number. Each generation must purchase by its deeds of valor, self-sacrifice, foresight and labor, security, blessings and advantages for the succeeding generation.—John B. Murphy, M. D., in *The Journal of the American Medical Association*, July 1, 1911.

Observations on Mitral Stenosis.—

J. C. Wilson, in *The Pennsylvania Medical Journal* for May, 1911, says: "Cardiac weakness is always due in the last analysis to conditions of the heart muscle which impair its competence. When one searches for the reasons for failure of the heart muscle, one must recognize that this is due either to increase of the cardiac disease itself as a result of a progressive lesion, or to the fact that a weakened myocardium has been subjected to undue strain. I wish to speak particularly of the second point because this is more within our powers of correction and control. One sometimes hears of men dying of acute indigestion and one is inclined to attribute this to erroneous diagnosis, the real cause having been a cardiac disease. As a matter of fact, while heart disease is, as a rule, present in such cases, it is necessary to recognize that an overloading of the stomach, stasis of the intestines and similar abdominal conditions play an important part in the final breakdown. Of all the causes that overtax an already weakened heart, disturbances of the gastro-intestinal tract stand at the head. Regular care of the stomach and of the bowels, therefore, is one of the most important elements in the management of cases of cardiac disease. Care of the skin, proper bathing, rest and exercise—all have their place in the scheme of prevention of cardiac overstrain. Moderation in diet, suitable rest, alternating

with mild exercise, warm, but not hot, saline baths, mild frictional massage, serve to rest the myocardium. Sometimes it is advisable to administer nitroglycerin and other remedies that dilate the peripheral vessels, for the sake of sparing the heart muscle. An objection to this plan is that such remedies, if used in efficient doses, tend to weaken the heart itself. Glonoin, therefore, is to be reserved for extreme emergencies rather than for continued use.

"Some thought must be given to the renal function also, though this cannot be reached so directly. Care of the skin and bathing, with proper regulation of diet, usually accomplish all that can be secured. Sometimes hot applications or dry cups over the renal region may help in cases of beginning failure of the heart and a suitable amount, without excess, of water drinking, should be insisted upon.

"The point that I would emphasize is that in very many cases of beginning failure of cardiac power we had better devote attention to the gastro-intestinal tract and external conditions, and give the heart a chance. The time will come when we shall need to resort to the final effect of remedies directed to the heart itself."

Scopolamin and Morphin in Obstetrics.—Brodhead, reviewing the "*Progress of the Year in Obstetrics*," American Journal of Obstetrics and Diseases of Women and Children, December, 1911, says: "Much has been written concerning the use, advantages and disadvantages of this combination of drugs. In my own experience in a comparatively small number of cases, the results were not specially satisfactory. Hatcher (10), in a careful review of the literature, reaches a number of interesting conclusions.

"He states that the technic of the use of these drugs, which is universally admitted to be essential to success, depends on a variety of conditions which cannot be fulfilled in the home; hence it is stated by nearly all investigators that the method is absolutely unsuited for general practice. Kronig states, however, that it depends on whether the general practitioner is willing to take the necessary time, care and trouble to insure success. A fixed dosage is irrational, and the drugs must be used with

reference to the physical condition of the patient, the nature of the operation, or probable course of labor, and due caution born of a full knowledge of the idiosyncrasies of the individual. To attempt to solve these problems in the home is to court almost certain failure.

"Among his conclusions we find:

"1. There are numerous contraindications to the use of scopolamin and morphin in child-birth.

"2. It seems probable that scopolamin and morphin may have a sphere of usefulness in child-birth as well as in surgery, but there are many details which require perfecting before they can become generally useful even in institutions.

"3. Scopolamin and morphin are wholly unsuited in the present state of our knowledge for use in general obstetric practice.

"4. There is no possible excuse for the employment of ready-made mixtures (pills or solutions) of scopolamin and morphin, since each drug must only be used with reference to its individual actions, bearing in mind that these actions may be greatly augmented or modified by the other alkaloid.

"5. The danger to the child must be kept constantly in mind, even when the utmost care has been exercised in the selection of cases suitable for the use of scopolamin and morphin, and when small doses are ineffective in inducing 'twilight sleep' large doses should not be used."

The Wassermann Reaction.—MacRae (*New York Medical Journal*, December 31, 1910) believes as the result of a study of fifty-four cases that it is probable that even should "606" prove harmless, future medication will combine this drug with mercury in selected cases. He holds that no patient should be treated without previous Wassermann reaction, and that each case should be followed in its course and the reaction repeated in a reasonably short period; that quantitative reactions after a suitable length of time should be followed by "606" with mercury. He thinks that a certain percentage of active tertiary cases with active Wassermann reaction must have the indication for "606" treatment more clearly brought out, and that in certain cases of obscure affections of the nervous system giving a negative reaction, but with antecedent history

of lues, clinical results have apparently justified the use of "606."—*Therapeutic Gazette*.

Leukorrhea.—Henry Jellett (*Practitioner*, October, 1910, 443) states that there is an almost universal tendency to consider leukorrhea not as a symptom, but as a definite disease, and to think that once the diagnosis of "leukorrhea" has been made, the only thing remaining is to try stock remedies. It cannot be too definitely stated that leukorrhea, like every form of pathological discharge, is due to a definite pathological condition; that this condition may be trifling or may be of the most serious importance, and that it is impossible, or almost impossible, to determine whether the condition is trifling or serious unless we first determine its exact nature. For these reasons the writer urges the necessity of a rectal or vaginal examination in order to secure accurate knowledge of the underlying cause. In virgins a rectal examination may be sufficient; but if not, no sentimental reasons should prevent vaginal exploration, with anesthesia if necessary. In the virgin, the most common cause of leukorrhea is cervical erosion in association with endometritis and in some cases with backward displacement of the uterus. Exceptionally, vaginitis may be the cause of leukorrhea, or tuberculosis of the Fallopian tubes if not causing their occlusion, or sarcoma of the body or cervix, and in later life carcinoma of the uterine body. Uterine myomata are fairly common causes of discharge. In the married woman also cervical erosion with endometritis is the most common cause. This may be the result of laceration of the cervix with or without bacterial infection. Uncommon intrauterine causes are retention of portions of an ovum and degeneration of uterine tumors such as myomata and carcinomata. Second in frequency as a cause of leukorrhea among the married is probably infection of the vulvar glands, especially those of Bartholin. This is usually of gonorrheal origin. Next in order is vaginitis. Of extreme importance in either married women or virgins as a cause of leukorrhea is the presence of neoplasms, both benign and malignant. Cancer of the body of the uterus may be suspected from the nature of the discharge, but a positive diagnosis can be made only by the microscopical examination of a portion of the

growth removed with the curet. A sloughing myoma of the uterus is occasionally seen. The writer feels that the facts above stated show that any form of routine treatment for vaginal discharge without first ascertaining the cause of the discharge is always absurd, and is sometimes even worse than absurd. —*American Journal of Obstetrics*.

Scabies.—Miller, of Cincinnati, writing in the *Therapeutic Gazette* for April, 1911, in speaking of scabies, says that: "Owing to the increased prevalence of scabies during the past few years, it seems proper to emphasize the importance of this disorder. The increase is noticeable in private as well as in public practice. It is necessary to recognize the fact that the disease attacks people in the best stations of life as well as the poorer classes. Classical cases with an immense number of vesicles, vesicopapules, papules, burrows, crusts, scratch marks, etc., in the usual places—i. e., hands, especially between fingers, around wrists, axilla, breasts of women, and on the penis and scrotum—are not very common even in the clinics of our large cities. The ordinary cases and those presenting few lesions are quite common. A few vesicles and pustules, perhaps a burrow or two, are the cases we meet with frequently, and often it is difficult to identify the disorder positively. The disease may closely resemble vesicular and pustular eczema, lichen planus, prurigo, and in children urticaria papulosa. With marked irritability of the skin (dermatitis), induced by overtreatment, difficulty is often encountered in making a diagnosis. The writer remembers a case in January of last year, in which the patient had been rubbing equal parts of sulphur and lard for several months. The result was a marked papular dermatitis, causing severe itching, which closely resembled a lichen planus. It was hard to convince the patient that she no longer harbored the itch mite. Withdrawing the irritating ointment and substituting rose ointment and soothing lotions, the condition cleared up in about six weeks. The diagnosis has often to be made simply on account of itching (most marked at night) and distribution of the eruption. A careful search is made for the burrow. If found, an endeavor is made to demonstrate the *acarus scabiei*; if not found, a careful observation should be made of the lesions, which are generally multi-

form in character (vesicles, papules, pustules), the exception being in light cases in which papules predominate. At times a history of the case will aid us in differentiating. Some member of the family may be infected; perhaps the whole family are successively attacked. Cases occur in January as well as in July. This fact helps to differentiate from eczema, especially of the hands, caused by the cold winds of winter and early spring. The eruption of lichen is usually dry; only rarely do vesicles occur. Prurigo is often limited to the extensor surfaces of limbs. A history may help, for prurigo is said always to begin in childhood. In urticaria papulosa, wheals occur when clothing is removed from the child. The hands, wrists and feet are not especially affected. Wheals are usually present at some time, but are so evanescent that many examinations are necessary to demonstrate the lesions clearly.

"Treatment: Unless thoroughly attacked, the disease is obstinate. One can see more scabies in Paris in one week than in four months in Berlin or New York. The French 'while you wait' system for the treatment of scabies seems indeed thorough. The patient is given a bath containing three ounces of sulphide of potassium to thirty gallons of hot water. After soaking for half an hour, he is scrubbed with green soap and a hand-brush. Then he reclines for a further period in the bath; in the meantime his clothes have been disinfected, and he is again rubbed with sulphur ointment, and dismissed cured. But such cannot be the case, for I am told patients return frequently during the year for another cure. Sulphur stands at the head of the list for remedial agents in the treatment of scabies. The disagreeable odor of sulphur sometimes complained of is entirely overcome by the addition of balsam of Peru. It is ordered in the proportion of one-half drachm of balsam to one ounce of a 10 per cent sulphur ointment:

R Bals. Peruv., 5.0;
Sulph. precip., 10.0;
Ung. aq. rosæ, 100.0.

The patient should begin treatment with a warm bath, during which the surface is thoroughly washed with soap—ordinary kitchen soap is best. The ointment should be used every day, sometimes twice a day, from three to six days, which is usually sufficient to eradicate all activity of the disorder. The undergarments, bed clothing

and outer clothing should be thoroughly baked. This can be done at home by wrapping in newspaper, placing in an oven, and removing when paper is slightly scorched. Beta-naphthol ointment 10 to 15 per cent strength is often used in adults. Cases of poisoning have been reported, so it is best to omit the use of this preparation in children. Wilkinson's ointment is a favorite in the clinic. One or the other of the remedies above mentioned will accomplish the result in all cases."

Personals.

Dr. Morgan Smith, Dr. C. W. Garrison, Dr. T. M. Fly, Dr. T. B. Bradford and Dr. J. B. Bradford attended the Second Annual Conference on Hookworm Disease, which met in Nashville, Tenn., September 14.

Dr. C. R. Shinault and family, who have been touring Europe, will arrive in New York about the 20th.

Dr. F. L. Proctor of Junction City has removed to Little Rock and opened offices at Seventh and Main.

Dr. James H. Lenow, the affable dean of the Medical Department of the University of Arkansas, has returned from New York and other Eastern cities.

St. Luke's, a private hospital being built by Dr. J. P. Runyan, is nearing completion and will be opened for patients about November 1. It is said to be one of the finest institutions in the South, and money was not spared to make it complete in every detail.

Dr. J. L. Greene, superintendent of the State Hospital for Nervous Diseases, assumed official control on the 1st of September. Many important and long-needed changes are proposed by the new superintendent.

CONWAY ITEMS.

Dr. Cecil H. Dickerson, who has spent a year as interne at St. Vincent's Infirmary, has located at Conway.

Dr. C. R. Doyne of the graduating class, Medical Department University of Arkansas, 1911, has opened an office at Conway.

Dr. B. F. Banister of the graduating class, Medical Department University of Arkansas, 1911, has located at Guy.

Dr. J. S. Lieblong of the graduating class, Medical Department University of Arkansas, 1911, has located at Greenbrier.

Dr. T. B. Snoddy of the graduating class, College of Physicians and Surgeons, of Little Rock, 1911, has resumed his practice at Saltillo.

Dr. H. B. Hardy of the graduating class, College of Physicians and Surgeons, of Little Rock, 1911, has resumed his practice at Hardinville.

Dr. W. R. Greeson, president of the Faulkner County Medical Society, who has been away on a vacation to New York and intermediate points, returned on September 1.

The Faulkner County Medical Society, after an adjournment for the summer season, will hold its next meeting at Conway on September 21.

County Societies.

JOHNSON COUNTY.—The Johnson County Medical Society held its regular monthly meeting at Clarksville, Ark., September 4. The roll call showed the following members present: J. S. Kolb, president; Annie Hays, vice president; L. A. Cook, secretary; W. R. Hunt, E. H. Hunt, W. J. Hunt, S. M. Graves, L. C. Gray and G. L. Hardgraves. The minutes of the meeting of August 7 were read and approved. Dr. W. R. Hunt reported the organization of the Johnson-Franklin County Medical Society at Coal Hill, and a request from that society for a joint committee conference with the Johnson County Medical Society, the Franklin County Medical Society and the Johnson-Franklin Medical Society to regulate fees in the territory covered by the membership of these societies, and on motion the president appointed Drs. Cook, Gray and W. J. Hunt to represent this society at that conference. Considerable time was then spent in discussing the "business side" of the profession. Dr. G. L. Hardgraves, who was appointed to write a paper on "The Housefly" for this meeting, asked for further time in the preparation of that paper, and the time was extended to the next meeting. Clinical cases

were reported by Drs. S. M. Graves, E. H. Hunt and W. R. Hunt, Dr. E. H. Hunt reporting a case of pellagra.

L. A. COOK, *Secretary*.

MISSISSIPPI COUNTY.—The Mississippi County Medical Society met in regular session on the night of September 12, at Osceola. The following members were present: Dr. W. H. Owens, Joiner; Dr. A. L. Franklin, Blytheville; Drs. E. E. Craig and H. F. Crawford, Wilson; Drs. H. C. Dunavant, T. F. Taylor and O. Howton, Osceola. Dr. M. C. Hughey of Rector, councilor for the first district, paid us his usual annual visit and joined in the discussion of the papers. The subject was Malarial Fever. A paper was read on the Cause of Malaria by Dr. T. F. Taylor, and another on Prevention of Malaria by Dr. W. H. Owens. It was decided to continue the subject of Malaria for the next meeting, to be held in Blytheville, October 10.

O. HOWTON, *Secretary*.

Book Reviews.

International Clinics.—A quarterly of illustrated clinical lectures and especially prepared original articles. Edited by Henry W. Cattell, A. M., M. D., with other collaborators. Vol. II. Twenty-first series, 1911, Philadelphia and London. J. B. Lippincott Co., 1911. Price, cloth, \$2.00.

In this volume subjects under medicine, surgery, obstetrics and gynecology, pathology, laryngology, ophthalmology and neurology are most ably dealt with. The chapter on "The Cultivation of Medicinal Plants" is well illustrated and is a most interesting study. "Mobility Malpositions of the Heart," by Thomas E. Satterthwaite, is an article of special interest and value. "Actions of Certain Intestinal Antiseptics in Gastric Digestion" is a most instructive article, giving special warning to the bad effects of certain antiseptics on digestion. "Progress in the Tuberculosis Campaign in Pennsylvania," by Flick of Philadelphia, and other articles of much interest are gotten up in the best of form, and the volume is indeed a good one.

OFFICERS OF THE AMERICAN MEDICAL ASSOCIATION, 1911-1912

Next Annual Session, Atlantic City, N. J., June, 1912.

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Council on Health and Public Instruction—W. B. Cannon, Boston, 1912; J. N. McCormack, Bowling Green, Ky., 1913; H. M. Bracken, Minneapolis, 1914; W. C. Woodward, Washington, D. C., 1915; H. B. Favill, Chicago, 1916; Frederick R. Green, 535 Dearborn Avenue, Chicago, Secretary.

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OFFICERS OF THE ARKANSAS MEDICAL SOCIETY, 1911-1912

Next Annual Session, Hot Springs, May, 1912.

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Second Councilor District—Cleburne, Fulton, Independence, Izard, Jackson, Sharp and White counties. Councilor, J. H. Kennerly, Batesville. Term of office expires 1912.

Third Councilor District—Arkansas, Cross, Lee, Lonoke, Monroe, Phillips, Prairie, St. Francis and Woodruff counties. Councilor, T. B. Bradford, Cotton Plant. Term of office expires 1913.

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Eighth Councilor District—Conway, Johnson, Faulkner, Perry, Pulaski, Yell and Pope counties. Councilor, A. H. McKenzie, Dardanelle. Term of office expires 1912.

Ninth Councilor District—Baxter, Boone, Carroll, Marion, Newton, Searcy, Stone and Van Buren counties. Councilor, F. B. Kirby, Harrison. Term of office expires 1913.

Tenth Councilor District—Benton, Crawford, Franklin, Logan, Sebastian, Madison and Washington counties. Councilor, M. S. Dibrell, Van Buren. Term of office expires 1912.

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County Society	President	Address	Secretary	Address
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Benton.....	J. W. Webster.....	Siloam Springs.....	J. A. Fergus.....	Rogers
Boone.....	J. H. Fowler.....	Harrison.....	F. B. Kirby.....	Harrison
Bradley.....	C. N. Martin.....	Warren.....	B. H. Green.....	Warren
Calhoun.....	E. T. Jones.....	Hampton.....	T. E. Rhine.....	Thornton
Carroll.....			J. Fred Bolton.....	Eureka Springs
Chicot.....			E. E. Barlow.....	Dermott
Clay.....	I. H. Cunning.....	Knobel.....	N. J. Latimer.....	Corning
Clark.....			J. H. Bell.....	Arkadelphia
Cleveland.....	W. L. Hartsell.....	Draughon.....	J. F. Crump.....	Rison
Columbia.....			P. M. Smith.....	Magnolia
Conway.....	F. Gordon.....	Morrilton.....	G. W. Ringgold.....	Morrilton
Craighead.....	H. T. Altman.....	Jonesboro.....	P. W. Lutterloh.....	Jonesboro
Crawford.....	O. M. Bourland.....	Van Buren.....	J. E. Blakemore.....	Van Buren
Dallas.....	C. J. March.....	Fordyce.....	H. T. Atkinson.....	Fordyce
Desha.....	J. M. Stuart.....	McGehee.....	R. R. King.....	Walnut Lake
Drew.....	M. Y. Pope.....	Monticello.....	M. B. Corrigan.....	Monticello
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CONTENTS.

Original Articles:

- Etiology and Pathology of Malaria, by William Krauss, M. D., Memphis, Tenn..... 127
- Cerebro-Spinal Meningitis, by A. L. Carmichael, M. D., Little Rock..... 132
- The Use of the Flexner Serum in Cerebro-Spinal Meningitis, by A. E. Cox, M. D., Helena 139
- Anterior Poliomyelitis, by D. C. Walt, M. D., Little Rock 140

Editorials:

- Public Health vs. Private Gain..... 142
- Maize vs. Simulium..... 144
- The Oklahoma Meeting of the Medical Association of the Southwest..... 144
- Texarkana Meeting of the Tri-State Medical Society of Arkansas, Louisiana and Texas 145
- Proceedings of the Sixth Annual Meeting of the Medical Association of the Southwest..... 145
- Miscellaneous 149-151
- County Societies..... 152
- Personals 152
- Births 152

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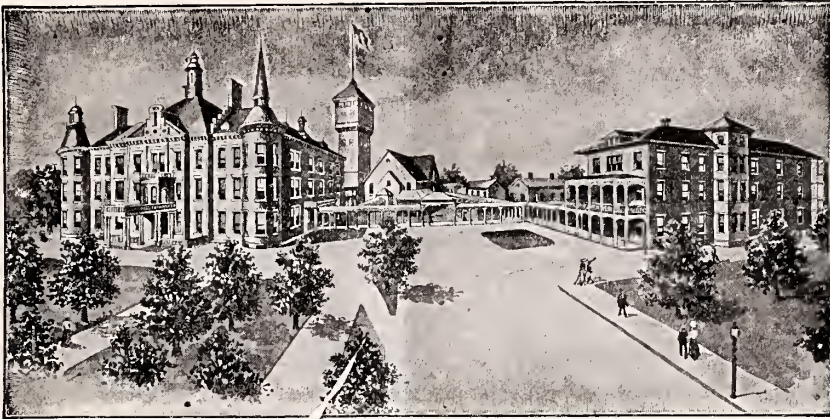
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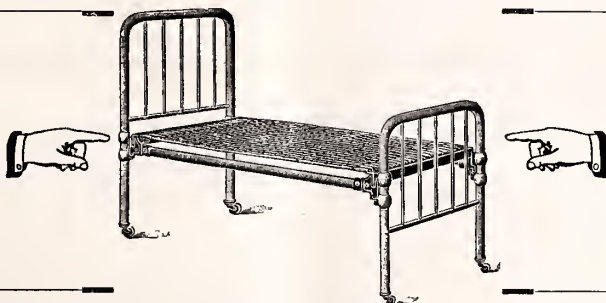
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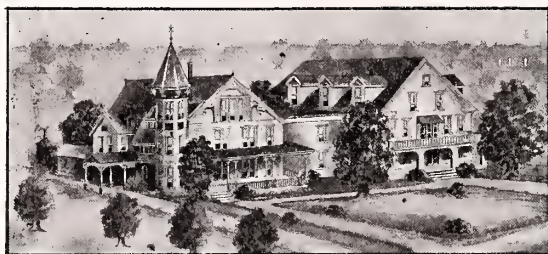
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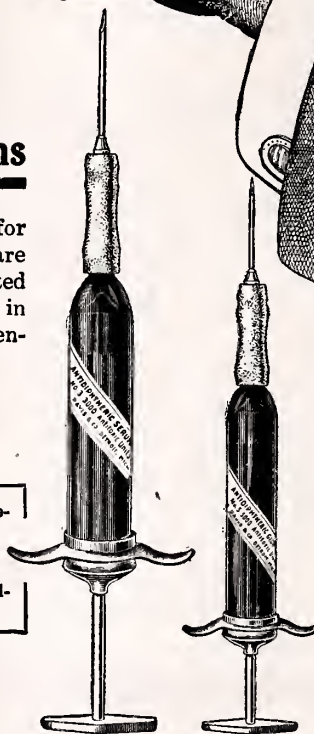
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Original Articles.

ETIOLOGY AND PATHOLOGY OF MALARIA.*

By William Krauss, M. D.,
Memphis, Tenn.

In handling a subject of this character, going over familiar ground is unavoidable. I suppose I am not betraying any secrets when I declare that the malarial parasite is carried by a species of mosquito. The *Anopheles* has palpi as long as the proboscis, and the antennae are small and unobtrusive. The legs are slender and black, and the wings show scales and veins with pigment on them which makes them look dark. The *Maculipennis* has black spots on the wings. When at rest, the body is not horizontal, but tips toward the head. These boat-shaped bodies are greatly enlarged ova of *Anophelines*. These do not form rafts as those of the other varieties of mosquito, but string out in stars and ribbons.

The larva of *Culex* is vertical to the surface of the water when "breathing," while

that of the *Anopheles* is quite horizontal, and that of the *Stegomyia* hangs obliquely. The wings of the *Culex* are lighter and the palpi are so short that they are hardly seen. It has a short proboscis, and the legs are hairy and show white areas at the joints. The *Culex fatigans* carries dengue fever. The *Culex* ova are always in rafts, in which the ova hang vertically.

The *Stegomyia calopus* is the carrier of yellow fever. The palpi are even shorter than those of the *Culex*, the wings are light and the legs are striped alternately dark gray and white. There are some marks here on the body which further distinguish this species.

There are three cycles of development of the parasite of tertian malaria, the *plasmodium vivax*. Beginning with the sporozoit, coming from the sporocyst, and which is stored in the big gland occupying the thorax of the mosquito, these bodies are injected into the blood. They enter the red cells, where they become schizonts and grow until they show evidences of division, and here the dividing mass has ruptured the red cell, and the new embryos are spilled out into the blood plasma. This requires 48 hours. After several such segmentations, each time the young ones entering new red cells, enough ac-

*Read before the Thirty-fifth Annual Session of the Arkansas Medical Society, at Fort Smith, May 3-6, 1911.

accumulate so as to cause the typical malarial paroxysm. This variable interval of time between the bite of the mosquito and the appearance of the chill is known as the period of incubation, and varies a great deal. It is shortened by some accident lowering resistance, and this accident has heretofore always been regarded as the "cause" of malaria, be it eating a watermelon, getting chilled, cold, wet, drinking bad water, eating an indigestible meal, a puerperium, the shock of an operation, etc. It is prolonged by previous attacks of malaria, robust health, regular living, good hygiene, and conservation of physical strength.

The bodies spilled out after segmentation are not sporozoites, but are called merozoites, and differ in no way from the others in their subsequent development. As soon as the patient begins to exhibit symptoms, i. e., when the first paroxysm has appeared, and in cases of frequent reinfection, without this, a certain proportion of parasites (schizonts) develop differently from this "short" cycle or "fever" cycle. The schizont immediately, instead of becoming a slender ring expands its growth in becoming more compact, and even this early two different types are apparent. This second one is paler and has a more diffuse and vesicular nucleus, which remains more indistinct and more central than the other, which, stains more intensely blue, with its chromatin very compact and at one pole of the body; this is the female gamete, or macrogamete. The other is the male gamete, or microgametocyte. When mature, they show practically none of the rim of the red blood corpuscle, and they remain thus indefinitely within the blood or internal organs, possibly years. When this blood is shed, the microgametocytes send out actively flagellating processes; these finally break off and lash about in the plasma, switching cells back and forth until they encounter a macrogamete. The whips are the microgamete, or male element, and when entering a gamete a vermicle results. This is not observed in shed blood unless it is in the middle intestine of the mosquito or within some other bloodsucker.

It is necessary, therefore, before a mosquito can become a transmitter of malarial

fever, for the patient to have gametes in the circulating blood, but these are very resistant, especially to quinin, and can be carried around long after the patient is up from his attack of fever; and these persons are the malaria carriers, rather than those ill with fever, and they are more dangerous than the mosquito, only a small per cent of which ever get infected, and even these have a high mortality or immunity; it has been found that, once infected and surviving, the vermicles do not seem to develop or else die. The majority of infections result from persons who believe themselves cured. This accounts for the "camp" malaria and that due to clearing land and digging up the earth. It is merely the colonizing together of persons, some of whom are gamete carriers.

We can tell the presence of gametes only by examining the blood. With a proper understanding of the different characteristics of the different species and cycles we can get an absolute view of the situation. We cannot do this from the pictures usually shown in the text-books. It is our duty to make this differentiation by examining the blood, because it is the only way in which we can protect the public from gamete carriers. Another point in this connection is the fact that so long as we treat our malarial fevers merely by recognizing the symptoms and giving medicine, the patient is justified in believing that it is not necessary to consult a physician. "I can recognize the symptoms," they argue. "I know what the doctor gives, and I will take the medicine myself," and they establish a "short circuit" with the doctor left out. If your patients recognize the fact that it is necessary to examine the blood, they will find that they will have to go to a physician, and thus the matter is placed on the correct basis, both with respect to the prophylaxis of the disease and the revenue of the physician.

Following this process now in the mosquito, we see that the vermicle becomes the ookinet, then the oocyst, and then the sporocyst. This cycle, after the blood is sucked, varies with the species of parasite and with the warmth of the weather. In hot weather some of them mature in five days, others in seven, at the shortest. It is not until the sporozoites are complete and

have reached the salivary glands of the insect that a subsequent transmission can take place.

It is shown that persons develop paroxysms long after the original attack, even after they have removed to a malaria-free country. Many persons go to springs or to the mountains and have a chill there. We also know the seven-day, fourteen-day, etc., relapses. This relapsing form of malaria has puzzled malariographers from the earliest time. Prior to the discovery of the plasmodia it was supposed to be a special form of malaria, and many have since thought a different kind of plasmodium was responsible. At present there are two views of these recurrences. Schaudinn, in 1902, announced his theory of parthenogenesis. Later, in 1909, Craig published his observations, and attributed the relapses to an intracorpuseular conjugation of schizonts seen in certain paramoebae.

The chromatin of the female gamete is in two separate fields, the one larger and paler, the other smaller, showing a few intensely staining chromatin filaments, the new portion undergoing nuclear division, the nuclear filaments augmenting in amount all the time. Finally we reach a stage that differs in no way from an ordinary segmentation, except that the remnant of the old gamete with its shriveled chromatin still attached. The cytoplasm of this portion contains all the pigment, and, when segmentation takes place, this is cast off. The female has thus perpetuated itself in a number of feeding schizonts, which can consume hemoglobin again and undergo further segmentation, just like schizonts generally do. But the progeny of the second segmentation show the characteristics of female gametes again, and, of course, there are no male ones. Such blood is sterile for mosquitoes, because there can be no fertilization. This parthenogenesis, or virgin birth, is common to many protozoa. Schaudinn observed all these stages successively in the same blood (that of Mrs. K., who lived in his household, and was suffering from repeated relapses). I will not detain you with the observations of Craig, which are still unconfirmed. Schaudinn's is known as the "female infection," and I have encountered pictures that appeared to tally with them.

It is a matter of some moment to be able to recognize species and stages of development. In the quartan parasite we have early pigmentation and more pigment; it is coarser than that of the tertian. The parasite is more opaque and stains more deeply than each of the others; it does not eat up all of the containing cell, is very much smaller and more compact than the other, is more apt to extend across the cell in the form of a ribbon, and the containing cell is smaller and continues to shrink, but remains round and smooth in outline, differing in this respect from the estivo-autumnal parasite. Its segments are only in a single circle and number from 8 to 12. The female gamete is distinguished by being round, and the chromatin is surrounded by a ring of pigment. It is smaller than all the others and the pigment is more black and coarser, not rod-shaped as in the tertian. You can recognize the gametes in their earliest stages by their denser cytoplasm, the male gamete being paler, and its chromatin more diffuse and always centrally located, whilst that of the female is to one pole. The parasite of quartan malaria matures every 72 hours, and a single infection gives us third-day chills, two infections, two daily chills with a one-day interval, and three infections may give daily chills, or, more generally, a more or less remittent fever. It is very hard to eradicate and does not produce gametes as readily as the others, which accounts for its greater rarity. Its generic name is the *Plasmodium Malariae*, first so named by Golgi, and, according to the law of priority, is alone entitled to this name, the tertian being the *Plasmodium vivax*, and the estivo-autumnal the *Plasmodium falciparum* (Welch); the quotidian type of the estivo-autumnal parasite, maturing every 24 hours, is the *Plasmodium precox*.

The tertian parasite is paler and larger in all its stages than the quartan. Its containing cell becomes larger and paler as the schizont grows, and, when stained much longer (30 minutes), the cell shows a peculiar stippling, "Schuffner's dots," of a deep carmin color. These red dots must not be confounded with the blue, more irregular and angular specks seen in infection with the estivo-autumnal parasite. By this long staining we can definitely differentiate these

two, and the quartan by the absence of either characteristic.

The ring of the tertian form early extends into a turban effect at the pole opposite from where the red chromatin speck lies; it begins to show a single pigment speck before the chromatin breaks up; the estivo-autumnal spreads its chromatin before any pigment is seen. On the tertian we see the most fanciful pictures, on account of its great vivacity (from which it gets its name); the smear shows whatever form the protozoon has for the moment assumed, showing fancy lacework, secondary rings and fantastic outlines. This readily distinguishes the half-grown parasite from all others. When quin has been taken the secondary loops tear open, showing filamentation with whip-like processes, and the chromatin is seen to have diminished or disappeared. The pre-segmenting body shows the chromatin in characteristic mitotic figures, each mass being surrounded by a clear zone and acquiring a bit of the blue cytoplasm. Just before segmentation each embryo is complete, and they form a double circle around the central pigment mass, the segments numbering from 16 to 22. The tertian gamete was described in the beginning when we discussed the plasmodium generically.

The 48-hour form of the estivo-autumnal parasite is generally seen in association with remittent and continued fevers. It is more toxic than the others, and a single paroxysm lasts 24 hours as against 11 hours for the other two; two infections give us remittent fever, because the temperature has not yet returned to normal before the next fever rise comes on; the broods mature more diffusely, hence the less character to the fever curve. In all of the stages seen in the peripheral blood it maintains the ring form, even after it has grown quite large. It is far the most slender of the three, forming a graceful, symmetrical ring, very small at first. Here we see its mode of entry into the cell. It usually remains superficial for a long time, the containing cell getting smaller, and also tending to shrivel up and become crenated, with retraction of the cytoplasm; it makes the cell more sick. With intense staining we see basophilic degeneration. The subsequent changes, after the ring has entered the interior of the cell, are rarely seen in the peripheral blood, and have for the

most part been studied from spleen blood. This is very dangerous, as in this trouble the spleen is apt to be soft and diffluent. The segmenting body may be composed of from 6 to 25 segments.

The gametes of this type are crescent-shaped when mature or nearly so. With the exception of the early oval outline, they follow the characteristics of the gametes already considered. The female has the chromatin more in the center and nearly hidden by coarse, rod-shaped pigment, and the poles stain more intensely blue and are free from pigment. It is also more slender, but after the blood is shed it becomes spherical. The male is broader and shorter, its chromatin is very diffuse and some of it is quite away from the center. It is paler than the female, and it also becomes round after the blood is shed, and before microgametes (erroneously called flagella) creep out from it. They can be seen forming in fresh blood, the chromatin approaching the edge and finally escaping, enveloped by blue cytoplasm.

The 24-hour form is smaller than this in all its forms, it pigments rarely, segments often in the peripheral blood, showing segmentation before one-third of the cell is used up. Its segments number 6 to 8. It is differentiated from the quartan by the shrunken containing cell and the great number of small, slender rings present in the same smear. It causes earlier changes in the red cell, with retraction of the cytoplasm (globuli rossi ottonati) and appears to be in a hurry to segment before the containing cell dies, hence "*Plasmodium precox*." It is the cause of pernicious malaria, more especially the comatose and algid types; it is characterized by massing in certain vascular areas, producing thrombo-arteritis.

The chart shows the pictures encountered in stained blood. It is presented for the purpose of showing what to look out for to prevent mistaking other pictures for plasmodia. All these red blood corpuscles with the blue centers are nucleated red cells, or "blasts." According to size, they are microblasts, normoblasts (the size of a normal red cell) and megaloblasts, or very large ones. These large ones have a pale, greenish nucleus, and it may show nuclear phases that make it resemble a malarial parasite. The platelets stain purple with the polychrome

stains; sometimes a single one is seen in the center of a red cell, with a pale area around it. Notice that it is purple, instead of blue, with a red speck of chromatin, as in this plasmodium. Occasionally we see 4 to 10 of them pouring out of a red cell, reminding the unwary of a segmentation. Wright insists that these are not platelets, but this detracts nothing from the fact that they are positively not plasmodia. The cell with the blue specks in it is a red blood corpuscle with basophilic degeneration. We find it in estivo-autumnal malaria, nearly always with the parasite there also. In pernicious anemia this form of cell is often seen. In the absence of the other characteristics of either malaria or pernicious anemia it points rather definitely to lead poisoning. The large cells below are the various types of white blood corpuscle.

Since it is necessary in order to have malaria for the parasite to get into the red blood corpuscle, it is a very simple proposition to figure out how it is possible for the parasite to get in after having worked out its life cycle in the body of the mosquito. It is necessary to have a stinging insect, in the body of which the malaria parasite can complete this portion of its cycle before it is possible to introduce the malaria organism into the blood. A man can swallow them, he may rub them on his skin, may try every possible mode, but it is entirely impossible to introduce the parasites into the blood so they can affect the red blood corpuscles unless they are injected into the blood either by a mosquito or a hypodermic syringe. That is the only possible method of producing malarial infection.

In the first instance the sporozoite, as soon as it gets into the plasma, develops ameboid properties. It is like an ameba or nematoid growth, gradually boring into the red blood corpuscle.

After entering, it loses its tail and becomes a schizont; finally goes through the short cycle of development. After the first segmentation the resulting bodies are merozoites. These merozoites have not any vermicular motility. They must find some other mode of entry into the red blood corpuscle. There seems to be some chemical attraction, and that chemical attraction is brought about by a sensitizing of the red blood corpuscle by the soluble toxins that have been poured

out at the moment of segmentation. In the course of time there is a certain amount of resistance developed against this influence, so that it may become more difficult for the merozoite to enter the red blood corpuscle and the development of latency is the result. It may be held that a patient that has been infected a number of times has a high degree of resistance and has developed a latency and will carry malaria around in that form; that is, he will probably not have symptoms of a chill or any symptom of malaria. He gets wet; he stands out in the sun on a chilly morning; he does some imprudent thing, etc., and he has a chill. Yes, but he had the infection before, and that is why it gave him a chill. That is the point.

With respect to the development of malarial latency, you must not lose sight of my remarks along that line and the fact that I emphasized in the beginning, and that is we must make the patient understand that the examination of the blood is an essential part of the management of an attack of malarial fever. We will then realize that it is necessary to go to a doctor. It means not less than thirty days' intensive treatment, because they are encysted and dormant. They do not require hemo-globin, they receive no nutrition and can remain a long time in this dormant condition. They are encysted; they give us no symptoms; we receive no signal to induce suspicion, and for that reason such cases are very difficult to cure—they relapse.

Of course, not every patient can stand 30 days of intensive treatment. In those cases you can pursue the treatment interruptedly. I should say that is the very best way to manage a situation of that kind. I would suggest deep intra-muscular injections, repeated at intervals. It facilitates the gradual absorption and the destruction of parasites with the least possible irritation of the gastrointestinal tract.

For my part, I do not know why we should give quinin by mouth, as it is a powerful local irritant. Every physician is equipped with a hypodermic syringe, and can get a soluble salt of quinin and inject it into the gluteal muscle. If the solution is made sufficiently dilute it is very much the best way to administer it. It is not variable. It is better for the patient. He does no object to it. He does not put the capsules under the pillow and tell you he has taken them.

The more chronic cases require some elimination. The toxic bodies passing through the liver and kidneys produce cloudy swelling, and the result is "biliousness." Some eliminative treatment is indicated whenever we have time before the next expected paroxysm.

As to other modes of administering quinin, they are not worth discussing. Introduced into the rectum, it causes violent irritation; the skin takes it up—practically not at all; in either case you do not know what you are doing.

CEREBRO-SPINAL MENINGITIS.*

By A. L. Carmichael, M. D.,
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Cerebro-spinal meningitis is an old disease, but the bacteriology of it is very modern and we speak of it as a disease of the nineteenth century. It is also interesting to note that the western part of Switzerland represents the point of origin of the disease. In the spring of 1805 there occurred an epidemic in Geneva, an affection unknown to the physicians until that time. Since that date the disease has slowly spread more and more; especially in the first decades of the last century a few epidemics were recognized, first in France and later on in other countries, and about the year 1902 there occurred again in Switzerland an appalling epidemic.

As a rule, the geographical history of diseases is treated with the utmost indifference, but the more we study medicine, the more we are impressed with its value, and without a thorough knowledge of such we are unable to intelligently study its pathology, infectiousness, etc., and we cannot learn with as much accuracy and certainty as in obtaining a thorough knowledge of this one particular point. This may explain some of our severe epidemics.

Medical history relates a few sporadic cases springing up in 1805 in Switzerland, and following closely on the heels of that other epidemics for one hundred years, then an epidemic breaking out again in 1902, which condition has existed since the disease was first recognized.

This would suggest to us the necessity of making a positive diagnosis in every case manifesting meningeal irritation, and, if it prove to be a case of the epidemic type, to absolutely quarantine and use every effort to protect the public from such a dangerous and dreaded disease. This is a decade of preventive medicine, and it is my opinion that if we would look after these cases in this manner we would reduce the mortality materially.

SYMPTOMS.

In most cases the onset is usually very abrupt, comes on with a rather severe chill, followed by fever, not usually going over 102 degrees Fahrenheit. I have seen it reach 110 degrees, but the temperature is no guide whatever in these conditions as in other brain lesions. Headache is severe, and in most cases starts with the chill. Vomiting is an early and important symptom, being present in every case seen by the writer. There are delirium, unconsciousness and coma; involuntary action of bladder and bowels. Retraction of head and rigidity of cervical muscles I consider the most important one clinical symptom. Kernig's sign is constant and appears early. The pulse is usually slow in the early part of the disease, gradually becoming faster as the disease advances. Herpes labialis is a frequent but not constant symptom. Conjunctivitis sometimes occurs and is usually quite severe. Very frequently marked irritability of the vasomotor system may be noted; the skin reddens to a marked extent and remains red a long time after palpation or after slight stroking. Photophobia is a common symptom. The pupils react sluggishly to light and there is often an inequality of pupils. I have seen the petechia, or rash, in only two cases. This at one time was considered a constant symptom.

With the above chain of symptoms we could make a diagnosis clinically of a purulent meningitis; but I do not believe we are justified in making a diagnosis from a clinical point of view alone. The above named symptoms, or even a part of them, I think, justify us in making a lumbar puncture and subjecting the spinal exudate to a bacteriological examination; and with anything short of this, or animal inoculation, we are not justified in making a positive diagnosis. In other words, lumbar puncture and bacteriological diagnosis is the only method at our command to

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differentiate between the various forms of purulent meningitis and other conditions that simulate it so closely, such as uremic and diabetic coma and tubercular meningitis.

DIAGNOSIS.

From a purely clinical point of view, the diagnosis of cerebro-spinal meningitis is not difficult. In contrast to the tubercular form, purulent meningitis is characterized by its sudden onset, running its course with moderately high fever, showing a more fulminant course and frequently attacking robust persons, whereas, the tubercular form frequently shows its changes in other organs and is almost always confined to ages under ten years. If in the course of the meningeal inflammation herpes labialis occurs, the tubercular inflammation cannot be absolutely excluded, but it is extremely unlikely. On the other hand, the appearance of choroid tubercles is absolutely in favor of the tubercular form. I do not believe we have a clinician today that would pretend to make a positive diagnosis from the clinical symptoms alone; but the history, clinical and microscopical findings form a chain of evidence that is indeed difficult to break. It is my opinion that a lumbar puncture should be made in every case manifesting meningeal irritation that cannot be satisfactorily explained to be due to something else.

TECHNIC OF A BACTERIOLOGICAL DIAGNOSIS.

Collect in a sterile test tube fifteen to thirty c.c. of spinal exudate; make smears, and stain by Gram's method; also stain with methylene blue. Collect or transplant two or three loopfulls on Loeffler's blood serum, place this in incubator from eighteen to twenty-four hours. In order to prove your diagnosis, the organisms must be intracellular, Gram negative. They must grow best on Loeffler's blood serum, sparingly on nutrient agar, must not grow on gelatin or bouillon. You will find strains, however, that will cloud the bouillon, but I have never been able to get a growth in this culture medium. Anything short of this technic I consider deficient, and this is considered sufficient by Flexner at the Rockefeller Institute for Medical Research.

By following the above technic we can positively determine the micro-organism, or organisms, for often we have a mixed infection,

and in that condition I have never seen one recover. In fact, it is not claimed that Flexner's serum does any good in any except the purely meningococcic infection. So you can readily see that we might have a disposition to give the serum a black eye, unless we know the nature of our infection. We know that most any or all micro-organisms will cause a meningitis, therefore the necessity of a careful and strict technic in our laboratory work. I mean by this that we should not be content with methylene blue stain alone, neither should we make a diagnosis by this method only. The question will sometimes be so close that with all this we will still be in doubt. For instance, an alcoholic meningitis. Again, the infecting micro-organisms are sometimes cut off above our site of puncture and we are not able to find any in the spinal exudate. In the epidemic type we always have a marked leucocytosis, therefore a blood count would be an important procedure. Counting the cellular elements in the spinal exudate is most important; by so doing we could differentiate a mechanical and an infective condition, where we were unable to find any micro-organisms.

Weighing the pressure with a mercury apparatus is of some assistance, but ordinarily we can estimate the pressure by observing the rapidity of flow through the needle or counting the drops as they flow.

I believe in cases that we cannot make a diagnosis by lumbar puncture, we should trephine, or if in an infant, go through the anterior fontanelle into the ventricle and secure the exudate in this way. Often the foramen of Majendi is closed by adhesions incident to the inflammation and we have a perfectly clear exudate obtained by lumbar puncture. This site, too, is the best place to administer the serum, in case of a meningococcic infection.

Lastly, we should resort to animal inoculation; this will often clear up conditions that have been shrouded in the deepest mystery.

TREATMENT.

Dr. Kerley has very truly said:

"When the medical history of the nineteenth century is written, the years of 1907 and 1908 will stand out prominently as marking the epoch when cerebro-spinal meningitis first felt the master hand. Up until that time we have stood as helplessly by the bed-

side of a patient ill with cerebro-spinal meningitis as we now do beside the tuberculous form. To the genius of Dr. Simon Flexner is due the elaboration of a serum which shows results in the treatment of this disease, which, to say the least, are most gratifying."

Since observing the marked effect of the meningococcic serum in the cases treated, I am about convinced that we have at our command a remedy that is as much of a specific in this condition as the diphtheritic antitoxin is in diphtheria; but on account of several features in its administration and the making of a diagnosis in each case, which act as drawbacks, we can naturally suppose that it will perhaps be some time before it is used by every doctor with as much confidence as is the diphtheria antitoxin is used.

The serum, to be effective, must be injected into the spinal canal by means of lumbar puncture. Its use is likely, therefore, to be restricted on account of the skill and experience required in its administration and the high cost of the commercial product, unless the preparation, distribution and, when necessary, administration, is undertaken by state and municipal authorities.

Statistics show that the death rate from cerebro-spinal meningitis has been reduced to less than a third of its former amount by the early use of the serum. That statistics may be reliable, however, it is important that we have means for controlling the bacteriological diagnosis; otherwise the serum will be applied in some cases of meningitis due to causes which are not subject to the action of this serum, and not a few cases of epidemic meningitis will be deprived of its use. The serum is without effect in any other form of meningitis than that caused by the diplococcus intracellularis (Weichselbaum), and its favorable action is most pronounced when it is applied early in the disease. The action of the serum is both bactericidal and phagocytic, and besides this action it acts as a diluent.

The effects of the serum most appreciable were, first, a sudden drop of the temperature; second, a rapid improvement in the patient's general condition, accompanied with a more or less relief of certain symptoms; and, third, to cut short the disease. The effect on the symptoms and general condition is the most striking phenomenon observed in the use of the serum. In some there occurred

a permanent return to consciousness, a disappearance of mental dullness and delirium, of headache, hyperaesthesia, tenderness of the neck and vomiting. These symptoms were relieved within twenty-four hours after the first injection, the patient changing in a remarkable way from a serious condition of coma to a favorable condition of normal mental activity. In other cases the improvement occurred more slowly, and in others—the late chronic cases—no effects were noticed.

The rigidity of the neck and Kernig's sign were the most persistent, so that at times patients remained normal in every other way while these signs persisted. The effects noticed on the cerebro-spinal fluid from repeated examinations made from twelve to thirty-six hours after the administration of the serum showed remarkable changes. The number of organisms were usually less in number, but this was not always so, but they were almost all intracellular, whereas, before you would find as many extracellular. There was always considerable less turbidity of the spinal fluid, and which condition gradually cleared up with each injection.

In three cases I was unable to find organisms after the third injection. In two cases I was unable to find organisms after the second dose, but I gave the third one to be on the safe side. I gave nine doses to one patient, finding organisms after each injection up until the eighth dose, and was never successful in finding organisms obtained from the ninth puncture. Relapses occurred in two cases; one responded to one dose of the serum, the other did not and died before twelve hours expired from the dose given on the relapse.

I had three cases that were evidently aborted. In every instance where it was given early, say as early as the second day from the onset, they recovered. One late chronic case began to improve from the first dose and completely recovered on three doses and had a rapid convalescence. This would suggest that improvement is at least possible even in late cases.

There are a few things in the way of expressions that I have been forced to hear, against which I want to go on record as raising a serious objection. First, telling the relatives "this is the last resort" is, in my opinion, most untrue to the developing science of the profession. If you want to do some-

thing beneficial for your patient, it should be the first resort. Second, telling them "it is an experiment." It is my opinion that it passed out of its experimental stage when Dr. Flexner quit giving it to monkeys. The only trouble that I have come in contact with has been from the attending physician making some such statement. It strikes me that unless one has had sufficient experience to convince him to the contrary, he would be doing a better part by his patient by totally refraining from any statement that would be detrimental to the serum. I was very much chagrined in one instance to hear a doctor tell the mother, "Putting a needle into the child's back will kill it!" I was very much gratified in this case to have the child recover on three doses.

Just as long as physicians manifest and express doubt and "straddle the fence," we cannot expect full cooperation from our patients. Diphtheria antitoxin was criticised and assailed with all manner of disbelief when it was never the fault of the remedy, but the one who was using it.

TECHNIC OF LUMBAR PUNCTURE.

The technic of lumbar puncture requires some skill, but after all it is really simple, and after one or two punctures are made we reach the canal with little difficulty. The patient should be placed on one or the other side most convenient to the operator, the knees drawn up well beneath the chin, the top shoulder depressed, bowing the spine as much as possible. The site of puncture, usually the space between the third and fourth, or fourth and fifth, lumbar vertebra, should be made aseptic; also, everything coming in contact with the patient. If the patient for any reason manifests a disposition to give trouble by moving, it is best to give a few whiffs of chloroform or a hypodermic of morphin and scopolamin, given about half an hour before puncture is made. I have never seen either do harm, and it makes it much better for both patient and operator. Usually, however, the patient is in a comatose condition and will not resist or give trouble, at least on the first dose; but I have always noticed even in the seemingly worst cases that they were always more sensitive to pain after the first dose.

Take the thumb of the left hand and make pressure between the selected vertebra, di-

recting the needle over end of thumb, pointing a little upward and inward. In adults you will usually be compelled to start the needle just a little to the side of the spinous process of vertebra; in children you can always go directly over the spinous process, shove the needle slowly, and you can readily recognize the canal by the lack of resistance offered to the needle. Now withdraw the wire of the needle, and if it is in the canal the spinal exudate will flow, sometimes with marked pressure, always so in the late cases. When made early there does not seem to be much pressure. Have a sterile test tube to collect the exudate and a tube of Loeffler's blood serum for your culture. You should collect in your sterile tube at least ten c.c. for smears, counting cellular elements, etc., and collect on your culture medium at least one c.c., because there may be so few organisms present in a less amount that you would not get a growth, and this would lead to error. I have learned from actual practice that it is better to collect the exudate in your test tube and let stand for a few hours and your cellular elements will settle; then you can take a loopfull or two and spread over your culture medium and are much more likely to pick up a few microorganisms, as they are not so diluted.

After withdrawing from thirty to forty-five c.c. or more of spinal exudate (and I have made a practice of taking away as much as possible in the latter cases treated), where you have considerable pressure, I have always noticed that it was of considerable benefit in giving marked temporary relief. I also believe that we can often prevent a hydrocephalous by taking away an amount to equalize the pressure. After this is done attach your syringe to the needle filled with the warmed serum and slowly and gradually force into the canal, giving at a dose not less than thirty c.c., even to small children, and forty-five c.c., as a rule, to adults. I have always noticed the marked effects in the large doses. This should be repeated within twelve hours if no improvement is noticed. If you get a marked benefit you can safely wait twenty-four hours, or even thirty-six hours; but never wait until the patient is in as bad condition as at first. Repeat the dose at twenty-four or thirty-six-hour intervals until you cannot find organisms in the exudate, regardless of how many doses it takes.

I believe a great advantage is obtained by elevating the foot of the bed for as long as four to six hours immediately after the administration of serum. I have made it a rule to elevate the head of patient while withdrawing spinal exudate, and lowering the head while administering the serum, and believe it to be of material benefit. I have not had much experience in administering the serum into the ventricle, only giving it in one case, with recovery. I have known one case to recover on one dose of only fifteen c.c. by giving it into the ventricle through a trepan. I would advise that method of administration of the second dose if we did not get results by the lumbar route. The technic is not difficult; the only thing to do is to miss the transverse and longitudinal fissures and put the needle into the ventricle.

ADJUNCTS TO TREATMENT.

As adjuncts to the serum treatment, I believe ice to the head is beneficial, and free purgation with continuous elimination. Hot baths are of unquestionable service in the way of producing quietude, allaying delirium and keeping the skin active. Supportive nutrition is, in my opinion, the most important essential next to the serum, and the diet must be as digestible as possible. Bromides seem to do good in some cases, some requiring morphin. I believe in giving that which will make the patient as comfortable as possible. I have learned that the more hot baths are used, the less drugs will be required.

I am strongly of the opinion that spraying the nose and throat is of utmost importance, not only to the patient, but the other members of the family that are exposed. Any good cleansing solution as liquor alkalinus antisepticus, or a solution of menthol, camphor and liquid alboline. I spray my own nose and throat twice a day while attending one ill with meningitis, and believe it to be one of the best prophylactic measures at our hands. Conjunctivitis needs attention, and the mouth and teeth by all means should have the same care as in typhoid fever cases. A bowel movement once a day I regard as sufficient. It is questionable in my mind that the iodides do any good, but I believe in one case which had considerable atheroma it seemed to do good. I was of the opinion at the time that his fibrosis existed before his meningitis and was not due to the meningial

inflammation. I know of no drug or measure except the serum that in any way modifies or shortens the course of the disease, and, according to all statistics, nothing has ever reduced the mortality except Flexner's serum.

REPORT OF CASES.

Case No. 1.—Male, aged 34 years; occupation, train auditor. Diagnosis made clinically. On second day of illness ordered anti-meningitis serum from Flexner by wire. Serum reached me in four days, making six days from onset of disease. Lumbar puncture made with result of a perfectly clear spinal exudate. No microorganisms of any nature found, either in smears or on culture media. Administered thirty c.c. Flexner's serum with marked result in general condition. Patient absolutely irrational at times. Next morning found him perfectly rational. Repeated the dose of thirty c.c. at twenty-four-hour intervals until four doses were administered. Patient did well in a general way except rigidity of neck and Kernig's sign persisted. Temperature normal; pulse good. Took plenty of nourishment. Ten days later had a marked chill lasting one hour, and temperature reached 108 degrees per rectum. Administered another dose of serum. Temperature immediately dropped and all symptoms cleared up nicely. Convalescence was slow, but he made good recovery with no sequelae.

Case No. 2.—Infant, two months old; male. Diagnosis had been made of some gastro-intestinal irritation. Was called on fifth day of illness. Lumbar puncture showed turbid spinal exudate; moderate pressure. Smears showed Gram negative, intracellular organisms with about as many extracellular. Beautiful growth on Loeffler's serum, which were all Gram negative. No growth on gelatin or bouillon. Administered serum at twenty-four-hour intervals until four doses were given. Child at this time seemed perfectly well, except weakness of muscles of neck. The child seemed absolutely moribund the first time I saw it. Two days elapsed from fourth dose and it manifested symptoms of becoming worse; however, there were no meningococci to be found in the fourth puncture and very few pus cells. Found very few organisms in fifth puncture. Did not have to repeat the dose and had perfect recovery with no sequelae.

Case No. 3.—Male, aged 40; occupation, butcher. Was called on twelfth day of illness. Lumbar puncture showed greenish turbid spinal exudate, with considerable pressure. Smears showed Gram positive and negative microorganisms. Beautiful growth on gelatin and bouillon. The Gram negative organisms proved to be meningococci and the Gram positive staphylococci. Administered thirty c.c. serum. Patient died in about fourteen hours.

Case No. 4.—Middle aged, 30; occupation, sawyer. Diagnosis had been made of la-grippe by attending physician. Saw this patient on twelfth day of illness. Lumbar puncture showed turbid spinal exudate; marked pressure; staining and cultural tests proved straight meningococcic infection. Administered thirty c.c. doses of serum until three doses were given. Very few meningococci found in third puncture; all intracellular. Patient died in next ten hours.

Case No. 5.—Male, aged 29; occupation, bricklayer. Condition simulated comatose malaria; heroic doses of quinin had been given, some with the needle, but his condition grew worse. Saw this case on the fifth day of illness. Lumbar puncture showed greenish turbid exudate with but little pressure. I think now the pressure was misinterpreted on account of the thickness of the pus, it being too thick to flow through the needle. Staining and cultural tests proved meningococcic and staphylococcic infection. Administered forty-five c.c. Death occurred in ten hours.

Case No. 6.—Male, aged 12. Lumbar puncture showed turbid exudate on second day of illness. Slight pressure. Meningococcic infection, more extracellular than intracellular on first puncture; second puncture showed all intracellular. This boy made perfect recovery on three doses. No sequelae.

Case No. 7.—Female, aged 28; housewife. Lumbar puncture made on second day of illness. Exudate turbid. Slight pressure. Intracellular and extracellular microorganisms. Staining and cultural tests proved meningococcic infection. Thirty c.c. serum given first dose with marked effect; forty-five c.c. given in twenty-four hours with still better effect. Administered two other doses at twenty-four-hour intervals. A few organisms found in

third puncture, but none in the fourth. Patient doing well for five weeks. Had another hard chill and temperature too high to record with clinical thermometer. No organisms found in the exudate obtained on this puncture. Patient never regained consciousness and died in eight hours from pneumonia, with complete consolidation of left lung.

Case No. 8.—Infant, aged two months. Lumbar puncture showed turbid exudate, slight pressure, very few meningococci. A few extracellular ones. This case was initiated with chill and convulsions, and I made puncture early on account of the mother, who was taken ill two days prior. This case made recovery on only one dose. No sequelae.

Case No. 9.—Female, aged 12; school girl. Diagnosis of appendicitis made by attending physician. Lumbar puncture made on tenth day of illness, showing perfectly clear exudate to naked eye. Smears showed very few pus cells and very few microorganisms, as many extracellular as intracellular. This proved to be a meningococcic infection. Thirty c.c. serum administered with most pleasing effect, patient sleeping soundly for ten hours, awaking perfectly rational. Repeated the dose in thirty-six hours with marked effect. This case recovered on three doses. No sequelae.

Case No. 10.—Lumbar puncture made on fifth day of illness. Exudate turbid. Marked pressure. Forty-five c.c. serum administered with marked effect. Straight meningococcic infection. Serum repeated at twenty-hour intervals until three doses given. Patient succumbed within ten hours after last dose.

Case No. 11.—Female, aged 6; school girl. Saw this case on second day of illness. Lumbar puncture showed slight turbidity of exudate, very slight pressure. Extracellular and intracellular microorganisms which proved to be straight meningococci. Child changing from unconscious state to perfectly rational condition, never becoming irrational again. Recovered on three doses of serum given at twenty-four-hour intervals, thirty c.c. at each dose. No sequelae.

Case No. 12.—Male, aged 10; school boy. Lumbar puncture showed perfectly clear exudate on first day of illness, exudate clear enough to read fine print through. Did not get a growth on Loeffler's blood serum until

exudate was centrifuged. Could not find microorganisms on smears until it was treated with same process. This proved to be a meningococic infection. Patient recovering on two doses of thirty c.c. serum given at twenty-four-hour intervals. No sequelae.

Case No. 13.—J. B., male, aged 7; school boy. This was a case of relapse after four doses of serum had been given. The attending physician stated that he could not find microorganisms in exudate from fourth puncture, therefore did not give any more serum. Twenty days later spinal exudate as turbid as on first puncture. Four more doses given with complete recovery. No sequelae.

This would suggest the necessity of using culture media or centrifugating exudate before giving an opinion.

QUARANTINE.

I believe that cerebro-spinal meningitis is more contagious than most physicians regard it. I believe that we should enforce a strict quarantine, allowing no one except the one in attendance to visit the patient. I have had three instances in which two members of the same family came down with the disease, evidently one contracting it from the other. One mother developed the disease and the next day her infant, only two months old, showed the disease. Another case where the son was first ill, the mother visiting him and coming down with it within one week. The other instance was two children of the same family developing only three days apart.

In conclusion, I would insist, first, make a positive diagnosis early; second, give the serum early and repeat it as often as indications demand, never stopping until every meningococcus is whipped out; third, enforce a rigid quarantine; and fourth, use every sound prophylactic measure known to science.

DISCUSSION ON DRS. CARMICHAEL'S AND COX'S PAPERS.

Dr. Thibault (Scott's)—In view of so many cases of meningitis, I am surprised at the rarity of the tubercular form. In other than epidemics of cerebro-spinal meningitis, considerably more than half prove to be tubercular. This is not only my personal experience, but the combined experience of men

that have made a great study of the cases. There are several articles in the first copy of the American Journal of Diseases of Children, one by Holt and several other writers on the bacteriology of meningitis. About 57 per cent of the cases seen in ordinary practice prove to be tubercular, and it is singular in Dr. Carmichael's paper that he should report ten cases of meningitis, or more, without finding one case of tubercular infection.

Dr. Carmichael—I only reported cases treated with the Flexner serum. I can now state that the first three cases I saw proved to be tubercular meningitis, but I only reported cases treated with the Flexner serum, because I understood it is a meningococic infection subject to the action of a meningococic serum, and for that reason I excluded the others from my report. After the first three cases that I punctured and which proved to be tubercular, I had five or six others, I don't remember how many.

Dr. Cox—I have nothing to say, except that I purposely limited my paper. I did not attempt to cover the technique. I only sought to bring out the practical side of a little epidemic we had over in my part of the state, therefore I made it very brief.

Dr. Carmichael—I have nothing more to add, except to emphasize again the importance of making a bacteriological diagnosis. Inasmuch as I do so often meet the tubercular form, especially in children, I think it behooves us to make a bacteriological diagnosis before giving the Flexner serum a black eye. I just feel like I do not like to have it condemned unless it does not prove beneficial in a meningococic infection. Then, I am in favor of jumping upon it; but I do want to emphasize the importance of making a bacteriological diagnosis. If you cannot do it by the staining and culture methods, resort to animal inoculation. Whatever you do, make it positive, and do not give an opinion from serum alone, but centrifuge and transplant to blood serum. Then, if you do not get a growth, you can almost positively state that a meningococic infection does not exist, or if it has been a case of meningococic infection, you can state that the meningococci have been eradicated.

THE USE OF THE FLEXNER SERUM IN CEREBRO-SPINAL MENINGITIS.*

A. E. Cox, M. D.,
Helena.

Some of the most discouraging experiences that I have had have been in the management of cerebro-spinal meningitis. During a small epidemic in Tennessee some fifteen years ago I lost nearly all of a dozen cases. In one family I recall, one child died in twenty-four hours and another in thirty, almost before we could decide what was the nature of the trouble that we had to deal with. The characteristic discoloration of the skin giving rise to the name "spotted fever" made its appearance in the second case just before death, serving as a key to our arriving at a correct diagnosis.

The classical symptoms of this malady are too well known to enumerate here; however, it is rare that one can assure himself that he is dealing with cerebro-spinal meningitis before the second day. An early diagnosis, in the humble judgment of the writer, is an all-important point that the serum may be given promptly and the progress of the disease checked and the infection killed.

That we owe to Dr. Simon Flexner and his co-laborers of the Rockefeller Institute for Medical Research of New York a debt of gratitude for the discovery of a serum that at once lessens the ravages of so formidable a malady as cerebro-spinal meningitis, is acknowledged and gladly granted by us all.

An analysis of the cases reported some two years ago by Drs. Flexner and Jobling are herewith appended, because they bear out our experience recently had with the disease, as well as reveal some very interesting facts:

Period of Injection of Serum.	No. Cases.	No. Recov- ered.	No. Died.	Per Ct. Mor- tality.
First to third day.....	123	107	16	16.5
Fourth to seventh day	126	96	30	23.8
Later seventh day.....	112	73	39	35

"In spite of the uncertainties surrounding the period of onset of the symptoms, which affect the accuracy of the calculations of the period, the beneficial influence of early injection is rendered sufficiently obvious by the table. The period embraced in the last

group is, of course, highly irregular, since not a few cases came under treatment when they were in semi-chronic or chronic state after many weeks of illness. On the whole, therefore, the outlook even for the latter class of patients is not wholly discouraging; and, indeed, we are of the opinion that so long as the diplococcus is still present in the meningeal exudate, and the mechanical damage to the anatomic structure is not irreparable, the employment of the serum holds out hope of considerable benefits. In one respect cases coming under my treatment at the end of a week, or even a longer interval since the appearance of the symptoms of meningitis, present the advantages which accrue from the spontaneous elimination by death of the severer and rapidly fatal examples of the disease, and a circumstance that some of them will already be progressing toward recovery. The offset to these advantages is to be found in the larger number of cases of the common and severer types, which, in the past, having survived the early acute stage of the disease, developed semi-chronic and chronic lesions, to which they succumb. Hence, in any considerable number of cases of the class under consideration, the fatalities have up to the present tended greatly to exceed the recoveries."

The point of injecting serum is between the third and fourth lumbar vertebrae, and our rule has been to withdraw spinal fluid as long as it will come away freely before injecting the serum, and in all instances withdrawing an amount equal to quantity of serum injected. The time of injecting the serum is immediately after diagnosis is made and repeat the dose every twenty-four hours until there is a marked amelioration of symptoms. Dunn, of Boston, advises several injections at the outset at regular intervals, without paying much attention to the effects of the single injections; he has placed this number at four. We have adopted the plan of using as many as four injections, at least, at twenty-four-hour intervals, but in every instance have subjected the spinal fluid to microscopical tests and allowed these findings to guide us in repeating the serum; that is, continue to give a daily dose of thirty c.c. until the diplococci can no longer be found on film preparations of the cerebro-spinal fluid. The importance of giving several full

*Read before the Thirty-fifth Annual Session of the Arkansas Medical Society, at Fort Smith, May 3-6, 1911.

doses at twenty-four-hour intervals, we believe, cannot well be overestimated, and as many more as are necessary.

That the use of anti-meningococcic serum in suitable doses and at proper intervals is capable of shortening the period of illness, preventing disastrous sequelae, and lowering the mortality from 70 or 80 per cent to 25 or 30 per cent, cannot be denied, and is indeed a marvelous gain over the old method of handling this formidable disease.

ANTERIOR POLIOMYELITIS.*

By D. C. Walt, M. D.,
Little Rock.

When the chairman of this section gave me the subject of "Acute Anterior Poliomyelitis" he doubtless knew that it gave me the privilege to write a text-book paper, as there has not been an epidemic of that disease for some time, and there has been nothing especially new along that line in medicine except some experiments confirming its infectious character. This disease was described by Underwood of England in 1774. Jacob Von Heine, in 1840, gave the first good clinical report of this disease, but evidently made little impression, for the valuable works of Caudie and Meigs, 1847 and 1858, respectively, made no reference to this form of paralysis. Since then a number of authorities have given it marked attention. The great Duchenne, in 1861, not only gave a lucid account of acute anterior poliomyelitis, but recognized the ascending and descending forms.

It often occurs in the form of an epidemic, which proves it to be one of the great horde of infectious diseases. The paralysis may be like a cloudburst and only recognized in its presence instead of its coming; it may also follow some acute, well-recognized infection as measles, scarlet fever and diphtheria, the cause being a transmittable entity, plus the condition of the patient, marks the severity of the lesion. The expression of injury done at the point of most disturbance necessarily depends upon the interference of the return flow of the floating medium that destroys the function of the cell nuclei of the anterior horn of the spinal chord, usually in the cervical or lumbar plexuses. This, like some

other conditions, marks its victims out of proportion to the apparent antecedent expressions, but from the fact that some of these cases are so slight and recover so quickly that they may be doubted to have existed, or are sometimes so severe that the atrophic condition even extends to the bone of the involved member, forces upon us by sheer reasoning that the field infected has the dominating balance of power for good or evil, which emphasizes the fact that we have neglected to educate the lay mind that children as well as adults should not be neglected from the point of physical care until they are an easy prey to be destroyed by various infectious diseases.

The greatest number of these cases occur from six months to two years, sometimes running up to ten years, occasionally occurring in the adult. It appears more frequently in the summer months. The various symptoms of summer disturbances may be associated with this disease, and one of the most important things connected with the diagnostic side of the question is that the doctor should make a very careful examination of the patient, otherwise he might be mortified by the paralysis not being recognized until several days or even weeks later than it should be. The legs are more often affected than the arms, one leg is more frequently affected permanently than both, more rarely the arms are alone affected, sometimes only one. Cranial nerve involvements are sometimes observed, also trunk-muscles sometimes suffer. The flexor groups suffer more than the extensor. The tendon reflexes are usually abolished. Sweating in the early stages of the affection should not lead to the conclusion that it is rheumatism, for the latter disease does not occur frequently in a child as young as two years. The surface temperature of the paralyzed members are always lowered. Somnolence and stupor occur in a good number of these cases; the child may be unconscious, crying and screaming; delirium may be present, and sometimes also convulsions. The dead knee jerks, and the flaccid character of the muscles, together with other characteristic manifestations, make the spinal affection recognizable. It does not leave in its wake mental impairment, as polioencephalitis, nor is the epileptic form tendency a sequel in poliomyelitis.

As suggested, the starting of the pathological changes begins in the blood stream or floating medium. When the chemical influ-

*Read in the Section on Medicine at the Thirtieth Annual Session of the American Medical Association, held at Fort Smith May 3-6, 1911.

ences are followed by an effect on the sympathetic nerve power it blocks up the return flow more specifically in some part of the anterior horn of the spinal chord, and causes infiltration that impairs or finally destroys the nerve cell to the degree of being incapable of generating or transmitting motor energy

over the nerve fibre, and a partial or complete paralysis follows.

The treatment can only be suggestive, as each condition should be measured and the remedies and methods applied as indicated; therapeutic measures, electricity, massage and braces are all means to an end of caring for the waste and repair.

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All communications to this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the State. Notice of deaths, removals from the State, changes of location, etc., are requested.

ADVERTISING RATES.

A schedule of rates will be furnished upon request.

CHANGE OF ADDRESS.

Change of address will be made if the old as well as the new address be given.

ANONYMOUS COMMUNICATIONS.

No anonymous communications will appear in the columns of this Journal, no matter how meritorious they may be.

NOTICE.

All changes of address should be sent to Dr. C. P. Meriwether, secretary of the State Society, as he furnishes the mailing list each month of our members. All communications for publication should be sent to the editor not later than the 5th of each month.

Editorials.

PUBLIC HEALTH vs. PRIVATE GAIN.

"Public Health vs. Private Gain" is the subject of a lucid article by Earl Mayo, which appears in the current number of Pearson's. As this article contains so much history and truth, we advise every reader of this Journal to secure the magazine and read the article in its entirety.

In view of the fact that Arkansas has recently had some experience with opponents of public health legislation, we are reproducing here that portion of Mr. Mayo's article which deals with the organization, purposes and activities of The National League for Medical Freedom. In answering the question, "What is the reason of a fierce outcry against the proposal to give adequate national attention to the question of public health?" the author says:

The best way to answer the question is to see what the ostensible observations are, how the proposal is being fought, and what the interests are that would suffer by the education of the public in the matter of health preservations.

One group of interests—aggressive, powerful, and seemingly unscrupulous—has genuine reason to fear a serious attempt on the part of the national government to teach the people how to preserve health.

The open opposition to a national health department, however, is comprised almost entirely within a single organization which calls itself the League for Medical Freedom. This interesting league sprang full-fledged into existence about the time the proposal to give national attention to the subject of health began seriously to be considered. It began an elaborate advertising and publicity campaign in opposition to the proposal, in the course of which upward of a hundred thousand dollars—more probably several times this amount—must have been expended. The league has been liberally supplied with funds and has had its agencies actively at work in many parts of the country in the effort to arouse opposition to health legislation, both state and federal.

One of the first acts of the League for Medical Freedom was to deny, with vehemence really unnecessary in an organization convinced of the purity of its own motives, that it had any connection with the patent medicine interests or with the opponents of the pure food law. No doubt the denial is technically correct. The men who are engineering the fight against an extension of national efforts to promote the public health are too shrewd to injure their own cause by an open alliance with their public campaign or an open contribution to its treasury. A fair way to judge the league, however, is by the men who compose it for all practical purposes and who dominate all its activities.

Chief of the little group is a radical publicist, who formerly was associated with a notorious medical quack and swindler. Another is a doctor-editor, who for years has lent himself to the exploitation of patent medicines. Another is the head of the advertising agencies that disburses the large sums expended by the league in the newspaper advertising through which it seeks to convince the American people that a national department of health would do something that it could not possibly do. There are others among the directors who have fought public health measures for many years, and who deny in toto the benefit of medical research and the value of accepted medical discoveries, such as the use of vaccine as a preventive of smallpox and of the antitoxin of diphtheria in cases of that disease. Among these is a woman who is the head of a society that for several years has been attempting to bring about the restriction of medical research in the State of New York, and who has publicly stated her disbelief in the germ theory of disease. Whatever may be thought of the sincerity of these persons, they are hardly to be accepted as safe guides and mentors in matters of public health.

The League for Medical Freedom advances a single stock argument in all its advertisements and other literature opposing a national department of health. This is a claim that the creation of such a department will lead to the establishment of a doctors' trust. It fails to supply any details of the method by which this result is to be accomplished, except to claim that in all probability the officials of such a department would be selected from among the physicians of what is known as the regular or allopathic school of medicine. This

is by no means certain. The health commissioner of New York, the state of greatest wealth and population, is a homeopathist, and others of all schools of training are doing good work in the health department of various cities and states. The fine shades of difference between the theories of the so-called schools of medicine have as much to do with the handling of public health questions as they have with the solution of the problem of the fourth dimension. And the head of a national department would have as much power to compel the people of the United States to accept the service of physicians of a certain school as the secretary of agriculture has to require all farmers to grow cow-peas or alfalfa instead of timothy. In other words, the League for Medical Freedom is attacking a straw man and is not even able to devise a respectably convincing covering for the straw.

With this grotesque bogey the attempt is being made to scare the homeopaths, the osteopaths, the eclectic physicians, the Christian Scientists and the sympathizers with all these into united opposition to a rational method of dealing with the problems of the nation's health. That persons, even in high places, have been frightened by this make-believe ogre is indicated by the fact that Senator Works recently made a long speech based on the ridiculous assumption that if the nation were to recognize the importance of public health it would in some way interfere with Christian Scientists in the practice of their accepted beliefs. Such argument belongs to the period when people could be made to believe that if a Catholic were elected to a federal office the Pope would immediately take possession of the capitol.

There is one group of interests—aggressive, powerful, unscrupulous—that has genuine reason to fear a really serious effort on the part of the national government to prevent the poisoning of the public with adulterated foods and fake medicines, that knows it will suffer from the enlightenment of the people on the subject of health preservation and disease prevention. It includes the men through whose efforts the starch is being taken out of the pure food law, the men who are trying by subterranean methods to oust Dr. Wiley, the men who claim to cure incurable diseases with useless nostrums or fill their pockets by cultivating in their victims a craving for habit-forming drugs, the men whose appeals to public credulity are false testimonials and lying promises.

This flourishing trade of manufacturing drunkards and drug fiends, these interests that claim the business privilege of preying upon the public health have suffered some reverses in the past few years. The pure food laws requiring the inspection of foods and the labeling of patent medicines containing alcohol or poisonous drugs required a hasty altering of some formulas and the abandonment of a few of the most preposterous claims. The Post Office Department has interfered with the operations of some of the most open swindles. The educational work of a few progressive health departments in a few cities, and the exposures of the nefarious business by the magazines have had some effect. But, as one of the men engaged in this very business cynically expressed himself to the writer: "The one commodity of which there is an unlimited supply is suckers." Only a long continued course of public education, a campaign that will carry the conviction and secure the attention that can be given to it only by a national department of health, with the enactment of laws that have starch in them and their enforcement by officials whose spines have plenty of the same commodity,

is likely to interfere with this still flourishing and powerful "business."

It is of this precisely that the violators of the pure food law and those whose business would be wiped out by the enactment of laws that would really protect the public health stand most in fear. The present requirement for the naming of a few dangerous drugs on the labels of medicines containing them does not seriously hamper the concocters of these preparations. Few persons read these announcements appearing in small type in obscure positions, and of those who do read them few appreciate the danger from apparently minute quantities of acetanilid or cocain or morphin. The barrier that might have interfered seriously with the growth of their bank accounts has been removed by the recent decision of the Supreme Court that the claim to cure an incurable disease even when the person making it must know it to be false is not punishable under the laws of the nation. This is medical freedom with a vengeance.

The pure food law, or a dozen such laws, as at present administered and interpreted, has few terrors for the purveyors of impure foods and dangerous drugs. But the prospect that the American public may seriously undertake the conservation of health, that the truth in regard to disease and the real worthlessness or worse of made-to-order "cures" may be spread among the people; that is a real threat. It is a danger serious enough to account for the carrying on of a campaign of humbug and lies all over the country, for frantic opposition to every step that is proposed for the improvement of health conditions.

It is impossible to prove in the legal sense that the men directly and financially interested in the sale of "doctored" foods and worthless nostrums are the animating and supporting force in this colossal attempt to hoodwink the American people with the scarecrow of a "medical trust." But let any intelligent man ask himself whether there is any other interest that has the ability, even if it had the will, to raise hundreds of thousands of dollars for a continuous campaign directed to such a ridiculous purpose as that which is given as the ostensible aim of the League for Medical Freedom. When the laws of the country permit each individual to follow any cult that may appeal to his particular order of intelligence or to treat himself and the members of his family if he so desires—and that is a right that the laws do protect—medical freedom could be no more complete. But the freedom that permits any man to deceive his fellows, to destroy their health and perhaps their lives, is a license that no government has the right to grant. Yet this is the license that the opponents of the national health movement are actually fighting to maintain.

The food adulterators and the patent medicine fakers are the real foes of a national department of health. They skulk in the background behind vapid legislators who prate of state rights, behind complaisant officials willing to support silly charges against upright administrators, behind honest Christian Scientists misled as to the real purpose of the proposal, behind anti-vivisectionists and anti-vaccinationists and all the fanatics they can rally to their support with talk of medical freedom. The medical freedom they seek is freedom to poison, debauch and slay, and their opposition should bring to the support of the movement every decent citizen.

The New York City Health Department reduced the city's infant death rate by 23 per cent during July, 1911. A National Bureau of Health could do the same thing for the whole country. How about it?

MAIZE vs. SIMULIUM.

A battle royal is now on between the Zeists and Anti-Zeists and will continue to be waged until one or the other hoists a white flag and calls for a truce. The struggle is not one which will be followed by bloodshed or destruction of property, but is a contest of scientists. When the proclamation of peace is published the people will be the victors, for the causation of another serious disease will have been discovered. In this scientific contest to determine the cause of pellagra, two groups of scientists have crossed swords, one led by Lombroso, and the other by Sambon. Lombroso and his multitude of followers have pitched their tents on the fields and are entrenched behind breastworks of corn, while Sambon with a determined, loyal minority has reconnoitered to the running brooks and swamps of Africa. The arms of Lombroso are being held up by an army of sympathizers, while Sambon almost alone promises his faithful few some positive statements in a short time. There is much to be said of both theories, and only time can answer the question, "Is it corn or is it a gnat?" A large majority of American investigators believe in the maize theory, but here are some conclusions reached by Sambon which are worth study:

Pellagra is not due to maize, either good or bad, because—

1. It is found in places where maize is neither cultivated nor eaten.
2. It is absent from many places where maize is the staple food of the population.
3. It has in many places either decreased or become more prevalent without any change in the food of the people.
4. Its constant and peculiar distribution does not agree with the very irregular and ever-changing distribution of spoiled maize.
5. In over a century and a half, since the maize theory was first suggested, no one has been able to prove it.

The belief that the disease has everywhere followed the introduction of corn cultivation is unfounded. Pellagra was first recognized as a specific disease in the beginning of the eighteenth century, but this does not prove that it was not prevalent long before that time.

Pellagra is a parasitic disease, because—

1. For years the person affected may present some seasonal recurrences, which can only be explained by a parasitic agent with alternating periods of activity and latency.
2. It shows a constant and characteristic topographic distribution.
3. It shows a definite seasonal incidence.
4. Its symptoms, course, duration, morbid anat-

omy, as well as its therapy, are similar to those of parasitic diseases.

5. Of two places, almost contiguous, one may be affected, the other not.

Pellagra is an insect-borne disease, because—

1. It is limited, like malaria, sleeping sickness, etc., to rural places and more especially to the vicinity of certain bodies of water.
2. It has a definite seasonal incidence—spring and autumn.
3. It affects, to a large extent, a certain class of people—the field laborers.
4. It is not contagious and neither food nor water can account for its peculiar epidemiology.
5. Within its endemic centers it affects all ages and frequently whole families.
6. Outside its endemic centers only adults who have visited the infection areas present the disease, and frequently only one or two members in a family are affected.

Pellagra is conveyed by *Simulium reptans*, because—

1. *Simulium* is found in the torrents and swift-running streams of all pellagra districts.
2. *Simulium* has the peculiar seasonal distribution of pellagra (spring and autumn).
3. *Simulium* is found only in rural districts. It is unknown in towns and villages. It does not enter houses.
4. *Simulium* explains most admirably the peculiar limitation of the disease to field laborers.
5. *Simulium* is the only blood-sucking insect which the British field commission has found in its visits to numerous pellagrous districts in Italy.
6. *Simulium reptans*, like *Anopheles maculipennis*, has a world-wide distribution and explains the wide distribution of pellagra. It is found wherever pellagra is found.
7. *Simulium* causes epizootics in animals in America and in Europe.
8. Professor Mesnil has found a protozoal organism in *Simulium*.

The scientific world is looking forward with great interest to the time when this question shall be positively answered. It is quite possible that we will have learned how to treat the disease before its causation is determined, but as prophylaxis is more important than treatment, we hope that its true etiology will soon be proclaimed.

THE OKLAHOMA MEETING OF THE MEDICAL ASSOCIATION OF THE SOUTHWEST.

In this number will be found the proceedings of the recent meeting of the Medical Association of the Southwest, held in Oklahoma City October 10 and 11. This association is rapidly growing in membership and scientific interest, and promises to be a strong factor in the evolution and progress of medicine in the Southwestern states. The scientific contributions to this meeting were of an exceptionally high character, and congratulations are offered the officers and committee who made this splendid meeting possible.

By a resolution the papers adopted at this meeting will be apportioned to the state journals of those state societies which form the Association. From time to time the papers apportioned to this Journal will be published.

TEXARKANA MEETING OF THE TRI-
STATE MEDICAL SOCIETY OF AR-
KANSAS, LOUISIANA AND
TEXAS.

The next annual meeting of the Tri-State Medical Society of Arkansas, Louisiana and Texas will be held in Texarkana, on November 14 and 15. A splendid program has been arranged and we bespeak for the meeting a good attendance. This society is deserving of a better attendance by Arkansas physicians than has been given it, and we urge that as many members of the state society as possible attend the meeting.

The Evolutionary Spirit for Betterment in Medical Education.—Allow me to conjure up before you the ideal educational tree as I would fain see it in this state in the near future. Behold, it is a stately tree, with its roots firmly implanted in the common schools, from which it receives its nourishment; its sturdy trunk embodying the high schools, from which it receives its stamina; and its branches outspreading into the various departments of the university, where it attains that maturity which enables it to put forth good fruits in arts, in agriculture, in engineering, in science, in law and in medicine. Then, with the aid of free medical education, would this stately tree bring forth in medicine the rich and abundant fruits to which our commonwealth is logically entitled.—Ferguson, *Journal American Medical Association*, April 8, 1911.

PROCEEDINGS

OF THE

Sixth Annual Meeting of the Medical Association of the Southwest.

Hot Springs Next Meeting Place.

Reported by Dr. Fred H. Clark, Sec'y-Treas.

While every one connected with the planning for the sixth annual meeting of this association had hoped for and expected a splendid time, none were prepared for the fact that this was to be the banner meeting in the history of the association, as it proved to be in point of the number registered, excellence of program and in the social features provided for the members and their wives. Both the physicians and their wives praised in the very highest terms the good times the physicians of Oklahoma City and their wives had provided for them.

The meeting opened with a meeting of the Executive Committee at the Skirvin Hotel parlors at 8 o'clock on Tuesday morning, with the president, Dr. M. L. Perry, presiding.

The first business to come before the committee was to authorize the secretary to accept the offer of C. W. Norton to report the proceedings and discussions of the Section on General Medicine at \$5.00 per diem and

the usual rate for the transcript to be furnished by the secretary.

The report of the secretary-treasurer was then presented, and, on motion duly seconded and carried, the report was received and referred to a committee consisting of Drs. E. H. Carey, J. D. Riddell and J. H. Scott to be properly audited.

The secretary read a letter from Dr. A. R. Edwards of Chicago, saying he had a very sick child at home, but hoped it would be enough better so he could keep his engagement for this meeting, and a telegram just received, saying the child was worse and he would be unable to come. As it was now the hour appointed for the opening of the general session, the meeting adjourned to meet at the call of the president.

Promptly at 10 a. m., Dr. E. S. Lain, chairman of the Committee of Arrangements, called the session to order in the assembly room of the Masonic Temple, where all the

sessions were to be held. In a few well-chosen words he outlined the plans of the committee and introduced Rev. Dr. Philip Baird, pastor of the First Presbyterian Church, and called the audience to their feet while Dr. Baird invoked the divine blessing upon the meeting.

Rev. Dr. Carter Helen Jones, pastor of the First Baptist Church of Oklahoma City, was introduced and welcomed the visiting physicians in well-chosen words.

The president of the association, Dr. M. L. Perry, now took charge of the meeting and called upon Dr. Jabez N. Jackson of Kansas City to respond to the welcome. Following this the president announced that in accordance with the custom of the past, the reading of the minutes would be dispensed with, and began at once the reading of the "President's Annual Address." He chose for his subject "The Management of the Nervous Child." It was filled with excellent advice given by a man who is thoroughly capable of giving it.

As the association at its last regular meeting had authorized the secretary to arrange for the first forenoon session of this meeting to be a general session, devoted to scientific work, the president called upon Dr. C. B. Hardin of Kansas City, Mo., to present his paper on "Remarks on Ulcers of the Stomach and Duodenum, with Citation of a Case of Ulcer of the Duodenum."

At the close of this most excellent and exhaustive paper the president announced that the discussion of these papers would be deferred until the sections met for the scientific work in the afternoon, and called upon Dr. A. L. Blesh of Oklahoma City to read his paper on "Surgery of the Gall Bladder and Ducts in Relation to Chronic Pancreatitis."

The last paper before adjournment was by Dr. L. Haynes Buxton of Oklahoma City, on "Ocular Complications in Hysteria."

The secretary then designated places for the different state delegations to meet to elect members of the Nominating Committee, after which the meeting adjourned to take up scientific work in sections during the afternoon.

MEMBERS OF NOMINATING COMMITTEE.

Missouri—F. B. Tiffany, C. C. Conover, S. G. Burnett, G. W. Robinson and S. C. James.

Kansas—W. S. Lindsey, J. E. Sawtelle, J. D. Riddell, C. A. Petty and M. F. Jarrett.

Texas—J. M. Inge, W. A. Wood, W. H. Freeman, F. D. Boyd and E. H. Carey.

Arkansas—T. E. Holland, E. H. Martin, W. T. Wootten, F. B. Young and J. M. Griffin.

Oklahoma—C. W. Fisk, D. A. Myers, J. H. Scott, W. E. Dicken and L. H. Buxton.

TUESDAY AFTERNOON.

The Section on Medicine met, with the chairman, Dr. Conover, in the chair, and excellent papers were presented by Dr. D. A. Myers of Lawton, Okla., on "Do You Do Your Duty in the Obstetrical Chamber?"

Dr. W. A. Woods, Hubbard, Tex., on "The Uses and Abuses of the Stomach Pump as a Therapeutic Agent."

Dr. E. W. Boardman, Parsons, Kan., on "Arterio-Sclerosis."

Dr. W. S. Lindsey, Topeka, Kan., on "Vaso-Motor Symptoms of Infantile Spinal Paralysis."

Dr. Charles W. Fisk, Kingfisher, Okla., on "The Therapy of Digitalis."

Dr. William Frick, Kansas City, Mo., on "Recent Advances in the Diagnosis and Treatment of Syphilis."

Each of the above papers was liberally discussed by a large number of doctors.

Promptly at 2 o'clock Tuesday afternoon the Section on Surgery was called to order by the chairman, Dr. J. F. Kuhn, with a large and enthusiastic attendance. The first paper was by Dr. Jabez N. Jackson, Kansas City, Mo., on "Retro-Caecal Appendicitis," followed by papers by Dr. J. F. Binnie, Kansas City, Mo., on "Intestinal Stasis," and Dr. John G. Sheldon, Kansas City, Mo., on "Incisions."

The discussions on these papers and on the paper read by Dr. A. L. Blesh before the general session in the morning completed the work of the afternoon, and the section adjourned to meet Wednesday morning at 9 o'clock.

At the afternoon session of the Section on Eye, Ear, Nose and Throat, Dr. H. Coulter Todd, chairman, presided. First came the address of the chairman, which was followed by papers by Dr. G. W. Maser, Parsons, Kan., on "Detached Retina—Its Surgical Treat-

ment," and Dr. Edward H. Carey, Dallas, Tex., on "Glaucoma."

After a full discussion of these papers, as well as Dr. Buxton's paper read before the general session, the section adjourned to meet Wednesday morning at 9 o'clock.

PARLOR D, SKIRVIN HOTEL, OCTOBER 10, 1911,
7 P. M.

Meeting of the Executive Committee with the following members present: President M. L. Perry, Drs. Burnett, Wood, Fassett, Martin, Glasscock, Scott, Riddell, Lain, Vance and Secretary-Treasurer Fred H. Clark.

On motion by Dr. Fassett, seconded by Dr. Martin, the committee decided to recommend that the session for the coming year be a three days' session.

On motion the secretary was instructed to omit in the future programs everything but the scientific papers and the business necessary to properly conduct the affairs of the association.

On motion the secretary and officers of the different sections were instructed in arranging for the next meeting, to arrange for a general session of all the sections in one body each morning and sections for scientific work each afternoon. After much discussion the secretary was instructed to publish the proceedings of 1911 in book form. By motion, duly seconded and carried, the committee then adjourned.

TUESDAY EVENING, 8 O'CLOCK.

The section met again in general session, when it was expected that Dr. A. R. Edwards of Chicago would deliver the principal address of the evening, but the secretary read a telegram from Dr. Edwards, saying his son was so seriously ill that he could not leave him. Dr. A. H. Andrews of Chicago, who was to have read a paper earlier on the program, consented to change, and delivered a very helpful address on "Trifacial Reflexes." (This paper will appear in full in the printed proceedings.)

Following this the audience was favored with a violin solo by Dr. DeMeglio, accompanied on the piano by his wife, which was greatly enjoyed by all present.

Dr. J. F. Kuhn, who was formerly assistant surgeon of the Public Health and Marine Hospital Service, was especially useful to the association in securing Assistant Surgeon R. M. Grimm, who at this time delivered a timely

and helpful address on "Pellagra," illustrated by the stereopticon which was provided for the association through the courtesy of Dr. F. Campe of Oklahoma City, who also assisted by operating the machine.

Following the address, a unanimous vote of thanks was tendered Assistant Surgeon Grimm, after which the meeting adjourned to resume scientific work by sections in the morning.

WEDNESDAY MORNING.

Promptly at 9 o'clock Chairman Conover called the Section on Medicine to order and called for the first paper, which was by Dr. W. T. Wooten of Hot Springs, Ark., on "High Frequency Current in Chronic Urethral Affections." Next was a paper by Dr. A. B. Leeds of Chickasha, Okla., entitled "What Shall We Do to Be Saved?" This was followed by a paper by Dr. A. S. Risser of Blackwell, Okla., on "The Larger Art of the General Practitioner," and the morning session closed with a paper on "Bromo-Delirium" by Dr. S. Grover Burnett, Kansas City, Mo.

The Surgical Section was called to order by Chairman Kuhn promptly at the appointed hour Wednesday morning, and the first paper was read by Dr. LeRoy Long of McAlester, Okla., on "Report of a Case Relieved by Intestinal Puncture."

This was followed by a paper by Dr. Chas. Blickensderfer of Shawnee, Okla., on "Abdominal Drainage," one by Dr. A. W. McArthur of Kansas City, Mo., on "Significance of Pain in the Upper Abdomen," and one by Dr. L. H. Huffman of Hobart, Okla., on "Practice of Surgery in Mexico and the United States."

Dr. H. C. Crowell of Kansas City, Mo., presented a paper on "Total or Subtotal Hysterectomy;" Dr. Frances A. Harper of Pittsburg, Kan., one on "My Method of Treating Uterine Displacements," the morning session closing with a paper by Dr. A. C. Scott of Temple, Texas, on "Inguinal Hernia."

This was a very busy session, for every paper was liberally discussed, due in a very large measure to the excellent management of Chairman Kuhn.

The Section on Eye, Ear, Nose and Throat did not have quite such a busy session Wednesday morning, and therefore was enabled to have a long and free discussion of each

paper presented, which is very necessary when full value is to be secured from a paper.

The first paper of the morning was by Dr. H. Moulton of Fort Smith, Ark., on "The Treatment of Trachoma," and the next was by Dr. Edward F. Davis of Oklahoma City, on "Dacryo-Cystitis, and the Tear Sac Operation." After this came a paper by Dr. J. H. Barnes of Enid, Okla., on "Hypopion Ulcer from Disease of the Tear Sac," followed by adjournment until 2 p. m.

WEDNESDAY AFTERNOON.

The afternoon session of the Section on Surgery began with a paper and exhibition of a clinical case of "Osteo-Myelitis," by Dr. J. E. Oldham of Wichita, Kan. Next came a paper on "Treatment of Sequelae of Polio-Myelitis," by Dr. J. D. Griffith of Kansas City, Mo., and one on "Cancer and Its Treatment," by Dr. W. L. Kendall of Enid, Okla. After this Dr. W. J. Jolly of Oklahoma City read a paper on "Septic Infection," and Dr. W. E. Dicken of Oklahoma City closed the scientific work of this section with a paper on "Differential Diagnosis of Diseases Causing Gastric Disturbances."

The work of this section then closed by electing the following officers for the coming year: Chairman, Dr. Bacon Saunders, Fort Worth, Tex.; vice chairman, Dr. J. F. Binnie, Kansas City, Mo.; secretary, Dr. Howard Hill, Kansas City, Mo.

The work of the Section on Eye, Ear, Nose and Throat began with a paper by Dr. J. E. Sawtelle, Kansas City, Kan., on "Post-Operative Tonsillar Hemorrhage." This was followed by the following papers: "Tonsillar Adenoids," by Dr. D. L. Shumate, Kansas City, Mo.; "The Conjunctival Flap, the Indications and Methods," by Dr. R. H. T. Mann of Texarkana, Tex., and one by Dr. D. D. McHenry of Oklahoma City, Okla.

After a liberal discussion of these papers the work of the section closed by electing as officers for the coming year: Chairman, Dr. H. Moulton, Fort Smith, Ark.; vice chairman, Dr. M. F. Jarrett, Fort Scott, Kan.; secretary, Dr. J. W. May, Kansas City, Kan.

The scientific work of all the sections was completed just before 5 o'clock, at which time the visiting members of the association, accompanied by their ladies, were given an automobile ride over the beautiful boulevards of Oklahoma City, through the courtesy of the local profession, the party returning to

the Masonic Temple at 6 p. m., where, in the banquet hall, a banquet had been prepared for all the visitors.

Dr. C. S. Bobo acted as toastmaster and called upon Dr. Flavel B. Tiffany of Kansas City, Mo., to respond to "The Bushwhacker in Medicine;" Dr. R. M. Grimm, Assistant Surgeon Public Health and Marine Hospital Service, to respond to "The Medical Man in Public Health;" Dr. Bacon Saunders of Fort Worth, Tex., to respond to "Flowers by the Wayside" (and Dr. Saunders gathered whole bouquets of them); Dr. J. D. Riddell of Enterprise, Kan., next responded to "The Jayhawker in Medicine" (write Dr. Riddell for his Swede story); Dr. H. Moulton of Fort Smith, Ark., to respond for Arkansas. Dr. Moulton said Arkansas had many things to be thankful for, but above all that she was the mother of Oklahoma. Dr. F. H. Clark was then called upon to respond for Oklahoma, the sentiment being "How Dry I am."

The toastmaster then called the local profession and local visitors to their feet and proposed the following toast:

OUR GUESTS.

"To know, to esteem, to love, and then depart,
Makes up life's tale to many a feeling heart."

At this juncture the president announced that the scientific work had all been completed and suggested that what business still remained could be transacted at this time, and in this way many of the members could leave for home on the late trains, which would be a saving of much time for them.

There being no objection to this plan, it was followed, the first item of business being the report of the Executive Committee, which was as follows:

The Executive Committee recommend that for the coming year arrangements be made for a three days' session. The committee further recommended that each morning and evening sessions be arranged for general sessions with appropriate papers presented, and that the afternoon sessions be devoted to scientific work by each section meeting separately.

The committee also recommend that for all future meetings the officers in arranging the program be instructed to eliminate everything but the scientific papers and such business as is necessary to properly conduct the affairs of the association.

On motion, duly seconded and carried, the

above recommendations were accepted and adopted.

The secretary-treasurer then presented his report, which was as follows:

Membership.

Total number enrolled as members since organization of Association.....	675
Total number members in good standing.....	291

Financial.

Balance on hand last report.....	\$189.21
Received from annual dues.....	448.00
Total	\$637.21

Expenditures.

Vouchers Nos. 1 to 16, inclusive, all approved by the President.....	\$574.76
Balance cash on hand.....	62.45
Total	\$637.21

Report of Auditing Committee.

"We, the undersigned committee, appointed to audit the accounts and report of the Secretary-Treasurer, desire to report that we have carefully examined the same and find each item correct as reported."

E. H. CAREY,
J. H. SCOTT,
J. D. RIDDELL.

On motion, duly seconded and carried, the above report was accepted and ordered spread on the minutes.

The following amendment to Article 8, Section 4, of the by-laws was proposed:

"By-laws, Article 8, Section 4. The secretary and Publication Committee shall divide the papers read at each meeting between the various journals published in the territory of this organization."

On motion, duly seconded and carried, the above amendment was unanimously adopted.

The Nominating Committee then reported as follows:

For President—Dr. A. L. Blesh, Oklahoma City.

For First Vice President—Dr. F. B. Young, Springdale, Ark.

For Second Vice President—Dr. G. W. Robinson, Kansas City, Mo.

For Third Vice President—Dr. W. H. Freeman, Lockney, Tex.

For Fourth Vice President—Dr. W. S. Lindsay, Topeka, Kan.

For Secretary-Treasurer—Dr. F. H. Clark, El Reno, Okla.

For members of Executive Committee to serve three years:

From Missouri—Dr. C. W. Fassett, St. Joseph, Mo.

From Kansas—Dr. J. D. Riddell, Enterprise, Kan.

From Oklahoma—Dr. A. D. Myers, Lawton, Okla.

From Texas—Dr. Bacon Saunders, Fort Worth, Tex.

From Arkansas—Dr. E. H. Martin, Hot Springs, Ark.

For place of holding next meeting, Hot Springs, Ark.

On motion, duly seconded and carried, the report of the Nominating Committee was adopted and each officer named was declared as duly elected.

The president then appointed Drs. Bacon, Saunders and W. T. Wootton a committee to conduct the president-elect, Dr. A. L. Blesh, to the chair. Dr. Blesh, in a brief address, thanked the members for this token of their favor and esteem.

Dr. G. W. Maser moved that we extend to the local profession and all who had in any way assisted in making this meeting such a great success a hearty vote of thanks. The motion was duly seconded and the president called for a rising vote, which was unanimous.

On motion meeting adjourned to meet in Hot Springs, Ark., in 1912.

Miscellaneous.

Cancer of the Female Breast.—J. N. Jackson (*Med. Rec.*, December 4, 1909) states that almost without exception the finding of a tumor in the breast is the first sign that calls the patient's attention to the existence of disease. Palpation is the most reliable means of diagnosis. It is essential that the flat of the fingers and palm of the palpating hand should be pressed gently down upon the breast and the tumor thus defined between the hand and the unyielding chest-wall. Though the nodule is small, its stony hardness is characteristic of cancer. Multiple tumors in the breast speak against malignancy. Early adhesion to the skin or pectoral fascia. The former may be shown by the occurrence of slight dimpling of the skin when the breast is moved on the chest-wall. Minute comparison of the two breasts is essential. Retraction of the nipple is significant if unilateral. Enlargement of axillary glands is conclusive only if inflammatory affections, tuberculosis, etc., are excluded. The literature reviewed shows that at least 90 to 95 per cent of all

tumors of the breast are malignant and no possible intelligence can determine which of the remaining 10 per cent will remain benign. There is no known cure for any tumor of the breast, benign or malignant, except through surgical removal. From 25 to 50 per cent of cases of breast cancer are permanently cured by radical surgical removal. With early diagnosis this percentage could be raised to 80 per cent. Every tumor of the breast, therefore, should be considered malignant and treated as such at the very first moment of its detection, unless incision has proven it benign, in which instance local excision should at least be insisted upon. To trifle with tumors of the breast is practically nothing short of criminal.—*American Journal of Obstetrics*, June, 1911.

Calomel.—In the *Therapeutic Gazette* for August, Stricker Coles considers the use of calomel to increase elimination in pregnancy. He has used it with gratifying success for years for this purpose and exclusive of its other actions. The effect produced by it upon the cells of the body, effecting the proper removal of waste of each cell, as well as stimulating the cells of the liver and the kidney and so removing the excrementitious products from the blood, especially deserve consideration. This action of calomel is best obtained by giving from one-twentieth to one-tenth grain three times a day, which course can be safely continued throughout pregnancy by omitting it for three or four days every two weeks. To get the best result from these small doses, it should be well triturated with bicarbonate of sodium, which increases its action and lessens the danger of salivation. He has made this method of administration a routine treatment in all pregnant cases in which elimination was deficient, as indicated by headache, slight disturbance of the digestion and diminution of solids and urea excreted in the urine. Usually in a week after beginning this treatment the symptoms will disappear, and the urea and solids become normal. Then the patient is instructed to discontinue the powders or tablets until she again feels the need of them. In cases seen with other physicians in which other diuretics and purgatives had been administered without success, he has found the trouble to clear up within a few days on calomel alone. Calomel, however, should not be employed in large

doses as a purgative during pregnancy, as it cannot be eliminated freely after accumulation, and may have to be stopped before it accomplishes its work because of the danger of salivating the patient. He has had but one case of salivation, and in that instance the patient, finding her health improved on taking one-fourth of a grain of calomel without soda three times a day, continued this treatment, contrary to directions, for three months. Even in this case, only slight salivation resulted without any serious effect on the patient, save that she was greatly distressed at having to forego the further use of the drug. He has never seen the slightest tendency to hasten or bring on labor from this administration of calomel, and he does not hesitate to give it even when the uterus is irritable and contracting more frequently than normal. The point he especially makes is that small doses given three times a day will act better in increasing elimination than one large dose, or small doses more frequently repeated. It will not only prevent toxemia in many cases, but will do much to relieve this condition when it is already developed.—*Cleveland Medical Journal*, October, 1910.

Mortality During the Early Weeks.—Many a cause of death may be avoided. Cold bathing, which prevents or defers reaction; hot bathing, which scalds the skin; improper washing and rubbing of the baby's mouth, during which the mucous membrane is corroded; wanton squeezing of the baby's breasts will give rise to microbic infection and cause sepsis—either in the shape of erysipelas or general blood poisoning—just as the contact of a baby's eye with a certain infected pus may produce blindness or prove fatal. Know the vicious mistakes, and avoid them, and the babies will live and your infant mortality diminish.—A. Jacobi, M. D., *Archives of Pediatrics*, January, 1911.

Jaundice in the New-Born.—Jaundice in the new-born, although in the vast majority of cases merely a manifestation of the condition known as icterus neonatorum, may be due to a variety of causes, some of them very serious. Knopfmacher's explanation of the origin of icterus neonatorum is the most satisfactory. No treatment is indicated. Septic infection of the new-born is far more common than is generally believed. Jaundice is a not uncommon symptom. No justification for

setting apart the cases with jaundice and cyanosis under especial names, such as Winkel's or Buhl's disease. Diagnosis from icterus neonatorum made principally on general condition, temperature and presence of bile in the urine. Jaundice from congenital obstruction and obliteration of the bile ducts is also rather more common than is usually supposed. In this condition the stools are white or gray at birth or as soon as the meconium has been passed and do not contain bile. The urine does contain bile. "Catarrhal" jaundice is very unusual at this age, but sometimes occurs. Diagnosis from congenital obliteration of the bile ducts is often hard, but can be made on the absence of enlargement of the liver and spleen. Jaundice sometimes occurs in connection with a syphilitic interstitial hepatitis. In this condition the liver and spleen are both much enlarged and other evidences of syphilis are almost invariably present. The so-called congenital icterus, in which babies are born jaundiced and remain jaundiced throughout life, the jaundice and its cause having little or no effect on the general condition or the expectancy of life, is very uncommon, only fourteen cases having been reported. The etiology is very obscure. Diagnosis cannot be made in the first few weeks. Jaundice also occasionally occurs in the newborn, which cannot be explained by any of the conditions mentioned, and which in some cases is not satisfactorily explained even after the postmortem examination.—John Lovett Morse, M. D., *Pediatrics*, April, 1911.

Excessive Child-Bearing as a Factor in Infant Mortality.—Under the present social system it would be immoral to counsel the middle or poorer classes regarding the regulation of the size of their families. Those who are sufficiently broad-minded to suggest marital volition are accused of bad motives. So the divine injunction "to replenish the earth" will go on unchecked and the narrow-minded, bigoted pharisees who wear the cloth will continue to justify it, and to heap anathemas upon those, who in the name of reason and humanity protest against this worthless sacrifice.

Among the poor and ignorant fecundity and propagation will continue to have free reign, producing a progeny that will necessarily become more and more degenerate, but

for the sake of heaven, for their own salvation and that of their descendants let the great middle class, who are the bulwarks of the social system, see to it that they have no more children than they can properly raise, educate and prepare for the strenuous battle of life.—Dr. Alice Hamilton.

Hookworm Disease—Questions Bearing on Possible Additional Harmful Results.—Strosnider, in the *Journal of the American Medical Association*, April 8, 1911, in discussing hookworm disease, asks the following very pertinent questions, each one of which may truthfully be answered in the affirmative.

1. May not many cases of neurasthenia and hysteria be attributable to hookworm disease?

2. Could not such perversions, among hookworm patients, as disobedience, profanity, lying, stealing, drinking, forging, and sexual perversions be attributable to hookworm disease, provided recovery followed cure of the hookworms?

3. Is not chlorosis or "green-sickness" in many cases a result of uncinariasis?

4. Is it not probable that a number of cases of defective eyes and ears and diseased tonsils and adenoids could be attributed to the same cause?

5. Is it not true that many abortions and miscarriages can be attributed to anemia resulting from hookworm disease?

6. Does not observation show that, as Dr. Nicholson of Onslow County says, whereas the average eclampsia with first child in the United States is 1 to 250, in women suffering with hookworm disease the average is 1 to 50?

7. Is it not probable that many women die from shock during labor as a result of hookworm disease?

8. Is it not a fact that, as a result of this disease, many women cannot furnish sufficient milk to nourish their babies?

9. Is it not a fact that hookworm disease is the cause of more amenorrhea, dysmenorrhea, and scanty and irregular menstruations than any other disease in our South?

10. Is it not a fact that a hookworm patient, pregnant, quite often suffers with a severe dropsy, and often after delivery may run an irregular temperature for some time and fail to react to tonics or quinin?

County Societies.

JOHNSON COUNTY.—The Johnson County Medical Society held its regular monthly meeting in the office of Hunt, Kolb & Hunt October 2, 1911. The following named members were noted present: J. S. Kolb, president; Annie Hays, vice president; L. A. Cook, secretary; G. L. Hardgraves, L. C. Gray, W. R. Hunt, Earle H. Hunt, Walter J. Hunt and S. M. Graves.

Dr. G. L. Hardgraves read a paper on "The House Fly," and discussion of the subject followed.

Dr. W. R. Hunt, who recently returned from a visit to the Mayos, gave an interesting brief report of his visit and the character of work being done there.

Clinical cases were reported by Drs. Graves and Cook.

Dr. W. J. Hunt was appointed to write a paper on "Osteo-Myelitis" for the November meeting.

L. D. COOK, *Secretary*.

BOONE COUNTY.—Boone County Medical Society held its regular quarterly meeting Tuesday, October 3, at 1:30 p. m., at Harrison, in Chancery Court room.

Several cases were reported and discussed. A paper on "Lane's Kink" was read by Dr. A. J. Vance. Dr. L. H. Cullen of Bellefonte was elected to membership.

The society voted to invite the Society of the Surgeons of Missouri and North Arkansas Railroad to hold its next meeting in Harrison, and to invite the physicians of the Ninth Councillor District to be present.

The society adjourned to meet January 2, 1912.

Dr. Frank Womack of Brush Hill, Okla., recently made a visit to relatives and friends at Harrison.

W. W. A. Butt, who has been located at Omaha, Ark., for several years, has recently moved to Green Forest, Carroll County, where he will continue the practice.

F. B. KIRBY, *Secretary*.

WASHINGTON COUNTY.—The Washington County Medical Society met in quarterly session at Fayetteville, Ark., October 3, 1911, with President Hathcock in the chair. The following attended the meeting: Drs. John M. Bearden, D. L. Bennett, D. Christian, E.

F. Ellis, W. T. Gabbert, Nina V. Hardin, A. J. Harrison, P. L. Hathcock, J. E. Martin, E. E. Wilson, H. D. Wood, W. N. Yates, F. B. Young.

After the reading of the minutes, Dr. V. B. Young moved, and it was seconded and carried, that the society postpone the reading of the scientific papers for one month (till the first Tuesday in November), and adjourned to the Washington County Fair, after a purely business session, that the out-of-town doctors might have an opportunity to attend while here.

The membership of Dr. R. R. Dinwiddie was transferred from the Sebastian County Medical Society to the Washington County Medical Society, and Dr. W. T. Gabbert was unanimously elected to membership.

Dr. John M. Bearden has returned to Sonora, after a year's absence at Rush, Ark. He will join the society at the January (1912) meeting.

NINA V. HARDIN, *Secretary*.

Personals.

Dr. J. P. Runyan will leave about November 1 to attend the meeting of the Congress of American Surgeons, which meets in Philadelphia on November 7.

Dr. E. E. Barlow, Dermott, passed through Little Rock recently en route to Johns Hopkins, where he expects to remain during the fall and winter.

Dr. O. W. Clark, Pine Bluff, has gone to Philadelphia for post-graduate study.

Dr. E. H. Martin, Hot Springs, Dr. F. B. Young, Springdale, and Dr. R. H. T. Mann, Texarkana, were prominent members who attended the meeting of the Medical Association of the Southwest, which recently met at Oklahoma City.

Dr. C. R. Shinault, wife and baby have returned from a three months' tour of Europe.

Dr. S. W. Colquitt, McKamie, has entered the University of Arkansas to complete the senior course. Dr. Colquitt was at one time assistant physician at the penitentiary.

Dr. C. P. Meriwether, secretary, has returned from a short visit to Rochester.

Births.

Born—To Dr. and Mrs. A. G. McGill, October 5, a daughter.

OFFICERS OF THE AMERICAN MEDICAL ASSOCIATION, 1911-1912

Next Annual Session, Atlantic City, N. J., June, 1912.

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State Medicine and Public Hygiene—W. H. Deaderick, Marianna, chairman; L. T. Evans, Bethesda, secretary.

Dermatology and Syphilology—Wm. R. Bathurst, Little Rock, chairman; J. H. Weaver, Hope, secretary.

Diseases of Children—Wm. Crutcher, Pine Bluff, chairman; E. E. Barlow, Dermott, secretary.

Delegate to American Medical Association—G. A. Warren, Black Rock.

Alternate to American Medical Association—W. N. Yates, Fayetteville.

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Third Councilor District—Arkansas, Cross, Lee, Lonoke, Monroe, Phillips, Prairie, St. Francis and Woodruff counties. Councilor, T. B. Bradford, Cotton Plant. Term of office expires 1913.

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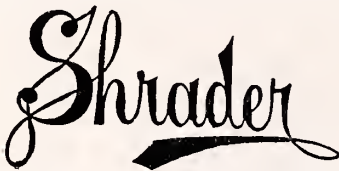
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LITTLE ROCK, NOVEMBER, 1911

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CONTENTS.

Original Articles:

- The Treatment of Pellegra, by E. H. Martin, M. D., Hot Springs, Ark..... 155
- The Pathological Sequences of Neglected Lacerations of the Perineum and Cervix, and a Plea for Their Immediate Repair, by E. E. Barlow, M. D., Dermott, Ark..... 159
- The Repair of Perineal Lacerations, by H. D. Wood, M. D., Fayetteville, Ark..... 162
- Address of Dr. L. C. McVay, President, Delivered at the Second Meeting of the Crittenden County Medical Society, Held at Earle, October 3, 1911..... 165

Editorials:

- More About the National League for Medical Freedom 167
- Dr. J. L. Greene..... 168
- Announcement 169
- Tulane Establishes a School of Tropical Medicine 163

Editorial Clippings:

- The Medical Profession of the State and the Antivivisection Agitation..... 169
- Another Interference With the Freedom of Cattle 170
- Is Popularization of Science Advisable?..... 171

Communications:

- Powers of County Boards of Health—Opinion by Attorney General..... 172
- Mr. Rector's Opinion..... 172

Miscellaneous 172

County Societies:

- Johnson County..... 174
- Crittenden County..... 174
- Mississippi County 175

Book Reviews..... 175

Books Received..... 175

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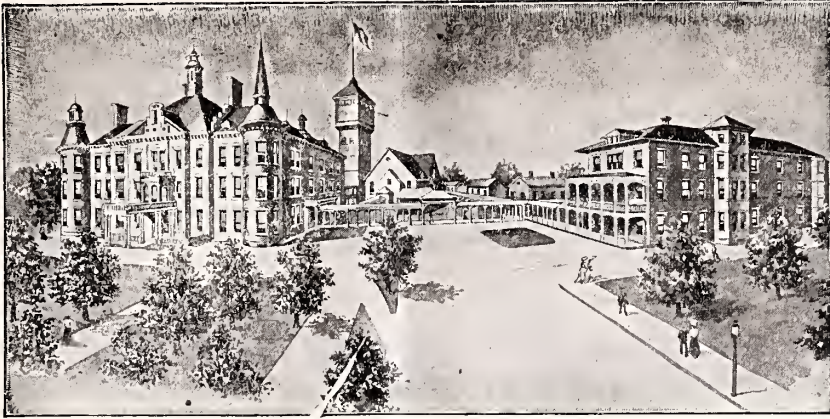
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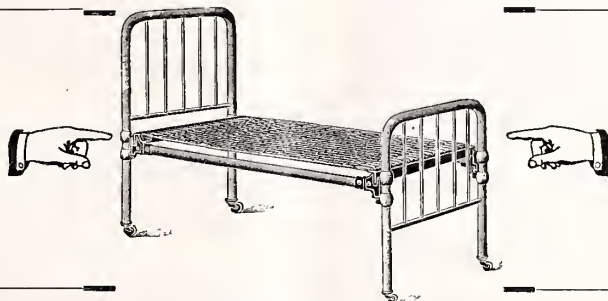
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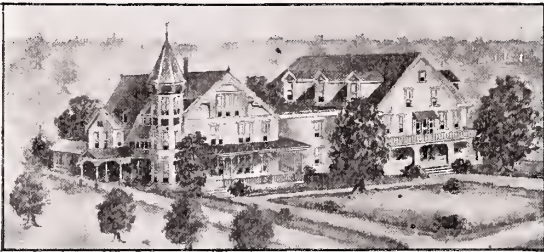
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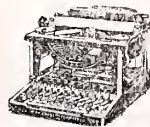
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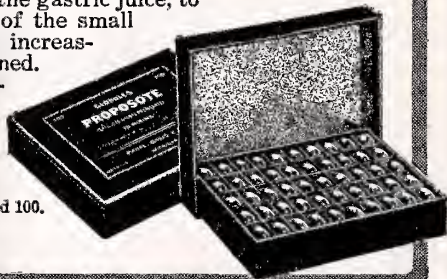
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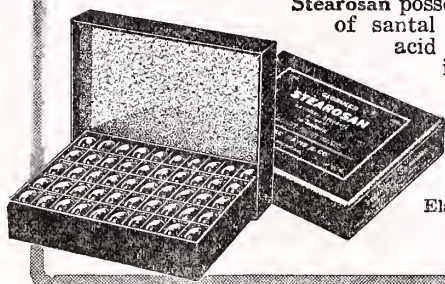
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Original Articles.

THE TREATMENT OF PELLAGRA.*

By E. H. Martin, M. D.,
Hot Springs, Ark.

The importance of this subject may be realized when we consider that there have been probably 100,000 cases of pellagra in the United States during the past summer, and that we may expect possibly half a million new cases next spring.

This paper will be confined to the specific treatment of pellagra, as the symptomatic treatment has been fully covered in many recent articles on the subject. I wish to explain here in the beginning that I have much to say in this paper about malaria and syphilis, it being necessary to make many comparisons in order to judge the habits of an undiscovered germ.

In 1909 I began to treat pellagra with soamin. While unsuccessful in a few cases, the soamin treatment gave brilliant results in others, and when it failed there was always some evident reason for its having done so--

either the patient was *in extremis*, or there was some organic disease present. As this treatment is very easily carried out, consisting merely of subcutaneous injections given on alternate days, or even less frequently, it seemed ideal and had but one drawback. That one objection was one which can be offered against another specific, mercury, in the treatment of syphilis. I refer to the long period during which the treatment must be continued.

It was recently our custom to insist on at least three years of mercurial treatment for syphilis, and frequently this was not sufficient. Similarly a case of pellagra apparently cured with soamin will relapse unless the soamin injections are continued. Just how many years this treatment must be continued there has not been time enough to determine.

Those patients who made apparent recoveries under the soamin treatment and who have kept it up during last season and the present summer have remained in good health. Those who have neglected the treatment have had slight recurrences during this year, but have responded to soamin when treatment was reinstituted. This is about as good a record as would have been expected in the same number of syphilitic cases treated with

*Read at the Sixth Annual Session of the Medical Association of the Southwest, held at Oklahoma City, October 10-11, 1911.

mercury, and might have satisfied if a better treatment for syphilis had not been discovered.

Reasoning from the fact that soamin had proven a powerful specific in syphilis and also in pellagra, it was but natural that when salvarsan proved to be even more positive in its effect on syphilis we might expect it to be also more valuable in the treatment of pellagra, especially when both soamin and "606" were built up from the atoxyl formula. This idea seemed to occur to many physicians at the same time, and I do not know who was first to use salvarsan in the treatment of pellagra, but it was administered to many cases during the early part of the season. The results obtained were very unsatisfactory and the reports differed greatly. There is a reason for this, as I will endeavor to explain.

First, let us consider the physiological effects of salvarsan upon a healthy person, and also its effects in cases of syphilis.

The physiological effects of an intravenous dose of "606" on a person in good health are surprising by their absence. If the subject is free from the diseases affected by Salvarsan, the physiological effects are absolutely *nil*. This statement will meet with some doubt and cause some surprise, probably. Many bad results are detailed even by physicians ordinarily well informed; they are invariably repeated by men who have had little experience with the drug. The results of the disease and the reaction following have been confused with the effects of the drug. Faulty observation.

In speaking of administering "606" I always refer to the intravenous method, as the subcutaneous and intramuscular methods are barbarous and inefficient. Salvarsan is perfectly harmless and innocuous *per se* to healthy persons and I prefer it to the Wassermann test when in doubt as to the diagnosis. A negative Wassermann is absolutely valueless, but a patient free from syphilis or pellagra or yaws will show positively no effects, good or bad, from a dose of salvarsan.

The picture is entirely different if the patient has syphilis. In a secondary case of some activity numerous spirochaetae are killed within a short time after the intravenous injection. From the killed germs is released a quantity of endotoxin, and one would expect the same results as seen in a case of malaria when a crop of plasmodia mature and release the poison causing a malarial paroxysm, is

all over in from four to six hours in secondary cases, and the patient is up and about the next day, feeling very well. And if the reaction is severe you may be sure that all of the germs have not been killed; the dose should be repeated every two or three weeks until the reaction is feeble or lacking—then consider the patient cured.

The picture is again different in a tertiary case of syphilis. Here the chill is generally omitted and the fever runs lower and longer. In many tertiary cases of very long standing, especially in syphilis of the nervous system, the paroxysm is delayed in onset, requiring from four to twelve hours to acquire a temperature of 100 to 101 degrees. This may be from the slow and irregular killing of spirochaetae which are embedded in tissues having poor blood supply.

I cannot emphasize this fact too much. The statement is, as far as I know, entirely new. No observer has laid stress on this fact before. But you can rely upon it as an absolute truth that salvarsan will not produce a reaction in a person free from the diseases affected by it. All ordinary cases of venereal sore, even if the diagnosis between chancre and chaneroid is in doubt, should be given one intravenous dose of salvarsan with the certainty of clearing up the diagnosis. If the sore is a chancre or mixed, you will get a reactionary fever of very short duration. If chancre alone, it will also heal in a few days. If chaneroid, there will be no reaction and the sore will persist. If mixed, you will get the reaction, but have a chaneroid left. In any case you eliminate syphilis.

Another class of cases in which the diagnostic value of salvarsan is invaluable is the very numerous class of well-treated cases of syphilis of from three to many years' standing. Patients of this class are constantly consulting you and asking if they are cured, and if they may marry, or if they may abandon treatment. They are latent cases in the strict sense of the word and they give a negative Wassermann, which means much for the present, but nothing for the future. Give these patients salvarsan and the reaction will prove that only 25 per cent have been really cured by mercury, and that 75 per cent have a few spirochaetae left to kill. Also, you will know that these have all been killed unless the reaction is severe, and in that case other doses should be given until no reaction or very slight reaction occurs.

The points of a reaction are chill, fever,

nausea or emesis, and bowel movements. The reaction is severe if there is a chill and a rise in temperature to over 100 degrees Fahrenheit. It may also be called severe if there is no chill, but a rise in temperature with profuse emesis and several bowel movements. Whenever there occurs nausea or bowel movements the reaction is positive even if the temperature rise is only fractional.

The rule is for this reaction to become less with each dose as fewer spirochaetae remain to be killed. Take a secondary case of syphilis in full bloom, for instance, and there will follow a severe chill, temperature may go to 104 degrees Fahrenheit, there will occur profuse emesis with or without many bowel movements. A second dose two weeks later will cause a much milder reaction in every respect, and a third dose two weeks after the second will give a very slight reaction, or none at all.

The only exception to this rule is in a case of cerebral syphilis, probably in the presence of gummata of the brain. In one such case the first reaction was only 101 degrees Fahrenheit without a chill. After the second dose this same patient had a very prompt chill and a rise of fever to 104 degrees Fahrenheit, with all of the other severe symptoms. Clinically, one would judge that the first dose destroyed the spirochaetae which were easily reached by the circulating blood, and then in some unexplained way caused all of the specific organisms which had colonized in the gumma to reenter the circulation, where they were met in numbers by the second dose.

With apologies for this necessary digression from the subject, we will return to pellagra.

When we consider the fact that this so-called reaction, or paroxysm, does not occur from "606," but from the endotoxins released by the killing of the disease-producing organisms, and when it further becomes apparent that a similar paroxysm occurs in a case of pellagra after an intravenous injection of salvarsan, there is much opportunity offered for surmise as to the shape of a pellagra germ. As syphilis and yaws, two diseases treated with "606," are each caused by a member of the spirillum family, or a similar species, it seems probable that pellagra has also a corkscrew-shaped germ.

Here must be noted an important difference in the paroxysm produced in a case of syphilis and in a case of pellagra. Instead

of a frank chill and fever as in secondary syphilis, the paroxysm in pellagra is more like that occurring in a case of cerebral or spinal syphilis. And it is even more prolonged, lasting in some cases six or eight days. From this we may at least surmise that the germ of pellagra is not usually free in the blood, but has its habitat principally in nerve tissue, in the cord and in the brain. There the circulation of the blood is so indirect that germs in the center of a nerve bundle might escape destruction longer than in tissues having a rich blood supply.

When we consider the debilitated condition of the pellagra patients who were given full doses of "606" last spring and the severity and length of the reaction following, it is not surprising that few of us dared continue the treatment until we had time to think more clearly and form some deductions from our observations. I gave my first dose of "606" to a pellagra patient early in April. The patient was weak and emaciated and the fever which followed for six or eight days almost caused a fatal termination. This danger was added to by the secondary staphylococcal infection of all of the deeper skin lesions, which occurred as soon as the pellagrous activity ceased, and the pellagrous activity did cease within twenty-four hours. The patient had extensive lesions on hands, arms and body. These disappeared in spite of the staphylococcal infection as promptly as new cuticle could be formed. The reactionary fever stopped after about a week. It looked as though the patient had been cured. The bowel movements became normal, the patient became stronger and went home. In a few weeks she relapsed.

I had a number of pellagra patients during May, but after the above experience I let the soamin treatment suffice except for those having mildly active cases, and whose strength had not been greatly impaired; to those I gave "606." Whenever given it acted as a specific and caused all of the symptoms of pellagra except neuritis to disappear promptly; neuritis is the most persistent symptom and leaves very slowly. But these cases did not stay cured. Relapses, or at least signs of activity, occurred in most patients in from three to five weeks.

This brought deductions as to the possible cycle of development of the pellagra germ. We all know that in malaria we have quinin as a specific, but that quinin will not kill the plasmodia until of a certain age. Presuming

this age to be over four days and the cycle of development of the malarial organism to be ten days, it is easy to understand why chills recur on the seventh day. All of the plasmodia over four days old being killed and the quinin being left off, a crop matures in six days. Still, we do not discredit quinin on that account, but take advantage of that fact to give it more intelligently.

It was evident that some such condition exists in pellagra, but with a longer cycle of development for its germ—possibly three weeks. In salvarsan we have a specific which, like quinin in malaria, will kill all of the pellagra germs of a certain age, but will not kill those at a younger stage of development, possibly on account of encapsulation. The problem, then, is first to regulate the dose of salvarsan as not to kill too many germs at once for fear of the large dose of endotoxins endangering the patient; second, to repeat the doses at such close intervals and so frequently that all of the immature germs may be killed as they reach the killable age and *before reaching the age of reproduction*. I have arbitrarily selected ten days as the interval most probably insuring these conditions, and have been giving two decigrams at the first dose, four at the second, and six decigrams, or a full dose of salvarsan, at the third dose. In some cases where no great debility existed and where the disease was not very active, I have given three full doses in proportion to the patient's weight.

Three of these cases happened to come under my care at the same time, and were treated alike. Each of them received two decigrams of "606" intravenously on August 22, four decigrams on September 2, and a full dose, six decigrams, September 12. None of them had a reaction of more than one degree after the first or second dose, and only one of them much of a reaction after the third dose. In this case the temperature went to 101.1 degrees Fahrenheit on the second day. Two of them received a fourth dose on September 25, and they had practically no reaction in either case. These three may or may not have enough, but can safely wait until next spring to determine that fact.

If these patients had had full doses of salvarsan at first they would have all been quite sick for a week, especially the one in whom the disease was most active. He had skin lesions of hands, arms and body, all quite extensive, and all disappeared in a few days. The other two had had skin lesions,

one very marked, which had previously disappeared under injections of soamin. At the time of the administration of their first doses they were in the usual pellagrous nervous condition and had the gastric and intestinal disturbances. Two of them gained six or seven pounds during the first interval, the third gained, but lost later on account of an intercurrent attack of malaria.

I may add parenthetically that Salvarsan has no effect on the malarial parasite, notwithstanding that that claim has been made. I have frequently demonstrated the malarial organism in the blood and have seen clinical evidence of its presence a few days after having given "606" for syphilis.

I am not going into statistical detail in this short paper, as I wish to press home certain ideas and the truth of each, and do not care to burden your minds with case reports. Will merely state that my conclusions concerning salvarsan are based on close observation of patients receiving 220 doses, either first, or second, or third, or fourth doses, and that my conclusions and opinions as to the curability of pellagra as herein given are based upon the personal treatment of forty-one cases, ranging from the mildest to the most severe. The conclusions as to the value of soamin are also backed by favorable reports of several hundred cases of pellagra treated all over the South, and these reports were sent to me voluntarily by physicians who had used soamin after reading the paper which I read in Memphis last fall before the Tri-State Medical Association.

To summarize the points which I wish to emphasize:

1. Soamin will relieve all of the symptoms of most cases of pellagra; it fails only when the condition of the patient is so feeble, complications so severe or the disease so aggressive that it cannot be given in sufficiently large doses. Usually it causes no reaction unless given in over five-grain doses. Some cases would require more and could not stand the reaction from the endotoxins. Given in ordinary doses, it must be kept up for several years, the time yet uncertain. It is probable that if ten-grain doses were safe that there would be no relapse, at least so one physician reports to me.

2. Salvarsan causes no symptoms if properly given to healthy people. In short, no disease germs, no reaction.

3. The fever following the administration of salvarsan to a case of pellagra is not due

to the drug, but to the endotoxins released from the killed germs; is also diagnostic and prognostic and further proves beyond a doubt that pellagra is a parasitic disease caused by a micro-organism vulnerable to "606."

4. That it is at least reasonable to believe that this organism is a spirochaeta or a spirillum.

5. That the character of the reaction, the duration of the fever especially, shows that the germs of pellagra are located principally in the brain and spinal cord.

6. That the endotoxins released by the destruction of the pellagra germs are so highly toxic to the human host that the dose of the drug must be proportioned so as to not destroy too many micro-organisms at one time, or the results may be disastrous to the patient. Observing patients given large doses of salvarsan, one can readily believe that in some cases a condition paralleling the so-called "congestive chill" in malaria might be produced.

7. Salvarsan does not cure pellagra in one dose, owing to the invulnerability of the germs at an early stage of development.

8. Prompt disappearance of symptoms shows that the older germs are killed.

9. That small and increasing doses, repeated within the time required for the development of the germs from the invulnerable stage to just before the stage of reproduction, gives us a rational treatment for pellagra and should offer as much certainty of a cure as quinin in malaria when properly given with respect to the seventh day.

THE PATHOLOGICAL SEQUENCES OF NEGLECTED LACERATIONS OF THE PERINEUM AND CERVIX, AND A PLEA FOR THEIR IMMEDIATE RE- PAIR.*

By E. E. Barlow, M. D.,
Dermott, Ark.

My reason for attempting to write a paper on this subject is based upon the vast number of unfortunate women suffering from lacerations of both the perineum and cervix which I have seen in my own practice, and while visiting the different clinics of the larger cities. It seems to me there is no class of cases so much neglected as those suffering

from laceration of the perineum and cervix. The importance of having the perineum and cervix intact and their influence on conditions of the central nervous system has not hitherto received that appreciation which it merits. When the perineum is extensively lacerated and prolapse occurs, it is easy to recognize that there is an obvious cause of suffering. But we meet with many cases complicated by nervous disturbances without prolapse, due, as experiment teaches us, to the existence of such lesions. That this is true there can be no doubt, although we may not be able to offer any satisfactory explanation of it.

A laceration of the perineum is sometimes accompanied with a general irritability which cannot be traced to any other cause and is only relieved when it is properly repaired. The immediate consequences of lacerations of the perineum are according to the degrees of injury sustained: if the laceration is of the first degree, the consequences are trivial; if of the second or third degree, the normal involution of the vagina and vulva is more or less interfered with and the danger of sepsis is greatly increased. On account of the resulting torn and lacerated open wound, pathogenic organisms gain ready access.

If the laceration be complete, the inability to retain the feces and gas will render the patient a miserable sufferer. The remote sequences, when the laceration is of the second or third degree, are many and not confined to the sight of injury. For it must be remembered that the perineum is the support upon which rests the internal organs of generation, as well as a part of the weight of the bladder. An injury of this structure necessarily disqualifies these organs from performing their function in a normal manner.

When the laceration extends to the anal sphincter and is deep enough to involve the levator ani and transverse muscles and the different layers of fascia, the posterior wall of the bladder and anterior wall of the rectum are robbed of their natural support, and a sagging of these organs is the consequence. As soon as the solution of continuity takes place, the denuded ends of muscles retract and, in time, by the process of healing, will be covered by mucous membrane, which gives absolutely no support, but allows a pouching downward of these organs. Straining in the act of micturition and defecation augments the trouble and in the case of the bladder, a cystocele, and in the case of the rectum, a

*Read before the Thirty-fifth Annual Session of the Arkansas Medical Society, at Fort Smith, May 3-6, 1911.

rectocele, are formed. This condition increases as time goes on, and finally the patient suffers with misplacements and infections of the organs of generation and the bladder, and the latter, unable to properly empty itself, succumbs to an intractable cystitis.

You are all familiar with the story told by this class of patients, as they come to you for relief—they all tell practically the same story. They begin their narrative by saying: "Doctor, I have not been well since the birth of my first child, and my condition has grown worse day by day. If I attempt to sweep or use the sewing machine, it will put me to bed. I suffer with violent headaches, pains in my sides, back and limbs; I have hot and cold flashes, a leucorrheal discharge and a feeling of pressure, as though everything in my pelvis was coming out."

What I have said of the perineum is equally true of the cervix, and practically the same nervous phenomenon accompanies lacerations of the cervix as of the perineum. I have seen cases of slight tears of the cervix with a greater degree of nervous reflex symptoms than usually follow the large tears. The antecedent changes consist chiefly of the modifications of the cervical structures, as fatty degeneration and edema, which occur during the course of pregnancy and result in a loss of the normal elasticity of the tissues. The subsequent changes relate to interferences with involution and modifications of local nutrition, which are caused by the laceration and the consequent interferences with the circulation. Laceration of the cervix rarely, if ever, heals spontaneously, repair occurring by the process of cicatrization; when the laceration is bilateral, the contraction of the cicatricial tissue causes a retraction outward of the cervical lips with eversion of the mucous membrane. The mucous membrane being exposed on the everted surface of the cervix, finally undergoes granular hypertrophy, which is diagnosed by many physicians as ulceration of the womb and treated with repeated applications of lunar caustic, carbolic acid and iodine.

Think of the great number of these poor creatures who are doped with drugs and treated locally with douches and suppositories of numerous kinds by doctors who have not the diagnostic ability to recognize the real trouble! I believe you will agree with me that practically all of the obstetric work in this country is done by the general practitioner. If this statement is true, then the

question naturally arises, Why should they not be qualified to diagnose correctly and deal properly with this branch of obstetrical surgery? The general surgeon or gynecologist never has the experience with normal labor that the general practitioner has; neither has he the opportunity to observe the minor variations from the normal; they are only called in in the cases demanding major work. If the general practitioner would inspect the perineum and cervix in each case after labor, and repair all injuries sustained, there would be little left for the gynecologist or general surgeon. That someone is responsible for these neglected cases there can be no doubt. The unqualified midwives, both white and black, are responsible for a great many; but the unqualified members of our profession are certainly responsible for the greater proportion of them. Occasionally we meet physicians who state that they have delivered many women without a tear. I was told by an interne in a Philadelphia hospital that he had delivered two hundred and eighty women in one year without a tear. Such statements are, I believe, erroneous, and merely indicate that the physician has not inspected the parts after labor. Such a person designates as torn only those cases in which the vagina and rectum have been converted into one cavity, to the existence of which his attention would assuredly be called by the patient. My experience is that most primiparous women sustain injuries of the perineum of some degree, and quite a large percent of the multiparous.

Cervical tears are not as frequent as the perineal tears, but their immediate repair is just as essential as that of the perineum, and my opinion is that those who fail to recognize and repair these injuries are guilty of criminal neglect. It seems to me that every doctor should equip himself with knowledge and have the necessary skill, knowledge and proper appliances necessary to cope with this branch of obstetrical surgery. And those who are not competent to do the primary operations should be honest enough to acknowledge their inability and call in someone who is competent. Such a course will not only win the respect of the family, but will restore their patient to her normal condition.

DISCUSSION.

DR. H. N. DICKSON, Paragould: The two papers refer to all there is to be thought of in the nature of the cases and the repair work and the method. I do not think that anything can be added.

DR. W. A. SNODGRASS, Little Rock: I did not hear Dr. Wood's paper, but I know it was good. Everything that he says is good. In reference to Dr. Barlow's paper, I heartily concur in every idea that he has brought out in the treatment of these cases. It requires more skill and time in making the examination than the majority of us will allow in doing that sort of work. It is a very difficult matter to repair a lacerated cervix immediately after the tear. It can be done, but I think in the majority of instances it would be better to repair the injury some time after the puerperium is over. We all know the amount of excitement that takes place immediately after the birth of the child, and usually the condition of the patient is a drawback, and if we have not got an operating room ready, there is difficulty in making a diagnosis of the extent of the lacerations. The condition that the cervix is in at that time renders it impracticable, if not well nigh impossible, to do an immediate repair on it. Sometimes these lacerations will heal up and leave blocks of scar tissue that is just as satisfactory as we could make it if we attempted to repair it immediately after being torn.

DR. R. L. SAXON, Little Rock: I enjoyed the doctor's paper very much. I think it is one that is very timely and thorough on questions important to every practitioner. Especially pertaining to the perineum, I think our attention should be given as readily as possible to the patient after a tear in all cases as was suggested in the paper read by Dr. Wood. There should be special care taken in bringing the parts together in repairing these perineal lacerations; the muscular structures first being brought together, both the levator ani and the sphincter if they should be lacerated and torn; and then the mucous structures being brought over very carefully. If you do not repair these perineal lacerations in this way, there will be exudates and sloughing, and you will get scar tissue deposits and your operation will be a failure.

One of the most important operations is the immediate repair of the perineum after laceration. The cervix is going to lacerate also, but, as Dr. Snodgrass suggests, many times these lacerations will repair themselves; so I do not urge the immediate repair of the cervix, but allow it a chance to repair itself. Many times it will be in better condition if there is no infection than before labor. But in cases where there is an infection and a deposit of scar tissue of long standing, as the doctor suggested in his paper, there is often an erroneous diagnosis made. In cases where we find pathological structures, such as fibrous tissue degenerating, we have to do an amputation. But if you find good tissue between the lacerated parts, simply dissect out the particles of fibrous tissue and bring the normal tissue together and repair just as you would a fresh laceration.

DR. H. D. WOOD, Fayetteville: Dr. Barlow asked me to discuss his paper. I do not know hardly what I could say. He has given us such an excellent paper on this subject, and he has certainly, as Dr. Dickson said, covered the ground most thoroughly. I want to say, gentlemen, that I assisted in the repair of a cervical laceration one time that I always regretted. A suffering woman came to see my medical associate at the time to know what her trouble was. She only had one child, which was eight or ten years old at the time. We found she had quite an extensive laceration that caused sterility. We did an operation and repaired the cervix. She became pregnant. I delivered her (she lived about eight miles in the country) by myself of the largest child that I ever saw. My recollection now is that the baby weighed sixteen pounds. It looked to me when

I laid it on the bed that it was six months old, in size. The woman was badly lacerated, and her condition was such that I did not think it was right to do a repair at that time, and I could not have done it because I was not prepared myself. She developed puerperal sepsis and died. There is one case that I have always regretted that I assisted in doing an operation for a cervical laceration, yet I hope that such a thing may never happen again.

I want to say to you now that it is not within the power of any human being to prevent laceration with such a child, and there are some conditions where the parts are badly bruised and torn that it will not be right for you to attempt an immediate repair. But I am most astonished of all to hear Dr. Barlow say that an interne in a Philadelphia institution had 200 cases or more and never had a laceration. I tell you, gentlemen, he needs somebody to look after his tears.

DR. C. P. MERIWETHER, Little Rock: I do not think there is anyone present who does not repair all lacerations immediately or within a few hours afterward, but I would like to know how many of them get a perfect result. I have been sewing them up for about eighteen years, but I have been unfortunate, and I cannot say that I have ever gotten more than 2 or 3 per cent of complete unions. The cases that I treated were not criteria, perhaps, as most of them were done in the country. You will most all the time get a partial union, but I believe there are very few primary unions gotten from repairs made primarily. I see more of the other physicians' cases now, and all were repaired at the time. I am doing them over four or five years later.

DR. JAMES A. FOLTZ, Fort Smith: My first disagreement with Dr. Meriwether dates back to our early days in the army. It was not over matters pertaining to gynecological surgery at that time. But we have been together in a good many medical society meetings since then, and I have always been forced to agree with the doctor in most all, if not quite all, that he had to say. But I cannot quite agree with him in his statement that the vast majority of immediate perineorrhaphies fail, and that in the vast majority of cases you do not get primary union. Very often in surgery, however careful we may be, we will get an infection; we will get some pus, will get some pockets which will result in failure of union by first intention, but I think that is rather an exception than the rule. I think in those cases, as a rule, where you do get bad results that you can trace it to some one of a good many conditions which at the time you probably realized were not quite ideal as to your technic. Not that the fault was in you, but that the circumstances surrounding the case at the time made it impossible for you to have ideal conditions; but I think I am very conservative when I say that 50 per cent of these cases should give entirely satisfactory results when repaired immediately.

DR. FRESTON HUNT, Texarkana: I was not fortunate enough to hear the paper read, but there was one remark of the essayist that struck me forcibly, that some interne had delivered 200 women without lacerations. This is rather startling. It calls to my mind, when I was a youngster, the first case of labor I attended. My patient was lacerated. I did not have any assistance. I was a stranger in the community. I was an accidental doctor. I was called because the physician they had engaged was busy. I proceeded to repair the laceration. After it was over I was taken into the back room by two or three good old Christian ladies who happened to be present, and advised that that tear was caused solely because of want

of assistance at the proper time on the part of the doctor.

I discussed this question with a physician who does a large practice, and he told me he very seldom had a laceration, and he never had infection to follow. I wondered if the man was not mistaken. I would not tell him that I was incredulous. The man who does obstetrical work and never meets with a laceration is a genius indeed, and we would do well to duplicate that man in every community and appoint him especially to look after that part of our work.

The repair of lacerations of the perineum immediately is of paramount necessity; more, gentlemen, to the laity than to the physician. Even if the tear be ever so small it deserves consideration of being restored to its normal condition, and the obstetrician who fails to perform that part of his duty is negligent indeed. There are many features and many phases in lacerations that could be gone into that would be of interest to each and every physician present, even though he may have delivered thousands of women.

I believe that I have had between 50 and 65 per cent of complete recoveries after immediate repair. Of course, circumstances are such that you do not expect complete recoveries in all cases. Today people of the greatest advancement and intelligence do not feel the importance of calling a physician, but they call upon some good old neighbor woman, and very frequently some old negro "mammy" to come in and help them out at these times. What do you expect in such case but trouble and infection? But the medical profession is learning, and is awakening to the importance of asepsis in obstetrical cases, their towels and the sheets and gowns of their patients. In ten or fifteen years—I will say in two decades—there will seldom be found a case in which we will fail to get complete recovery with immediate repair of a lacerated perineum.

DR. D. C. SUMMERS, Elm Springs: It seems to me that the remark of this interne of a Philadelphia hospital has created more impression upon the minds of the gentlemen present than any other remarks connected with these papers. I know a few doctors who are given to blowing, and I have heard them make similar assertions, especially upon this very same point. I will say that I have come to the conclusion, just as I did here this morning in regard to the statement of this interne, that the reflections and remarks of the old Scotchman that I read about somewhere would be applicable just here. He was reading the Scriptures and came across that passage where David said: "I said in my haste all men are liars." The old Scotchman looked at it a moment, adjusted his spectacles, roached back his hair and began to think. He said, "Ah, me, good old Father David, if you had lived in this year and day you might have said that at your leisure, sir." (Applause.)

DR. C. H. CARGILE, Bentonville: One point has not been mentioned here this morning as against deferring these operations. Too frequently we cannot get the consent after the patient gets up. Like the rest of you, I have had many such accidents, and when I hear a man say he has not had them, I put him in the Ananias Club. A few years ago I was called in consultation with a physician about sixty-five years old. He had a fairly good practice. Five or six days after the woman was confined there was found a bad infection. He said that was the first and only case he had ever had. I wondered if I had not seen it whether he would have had that one.

For the benefit of some of the young men, if you will excuse me for being personal, I will relate a little personal experience. When I began to

practice medicine I located in a place where the operation was not done, and when I had these accidents I repaired them. Very soon the wives of the neighborhood—some of the old ladies—began talking about my having too many cases. It created a very great prejudice against me, and very soon I did no obstetrical work. Others did not have these accidents. The physicians that had practiced there twenty-eight or thirty years had never had these accidents. You can easily see how much it operated against me. I am ashamed to say that I was cowardly; I broke down and let my patients pass like the others had done. But before long those patients whom I had operated upon began to contrast their condition to some of their neighbors, and a reaction in my favor came. I began to do the operation again, and I am not sorry that I did, because I was more than repaid for my loss. So, I would say to the young man, be brave in this matter, let the old, long-tongued women say what they please, do your duty and you will win out after a while.

DR. WOOD: I want to say to you that I can sympathize with you on that line. I have had it said of me I seem to have more perineal tears than anybody else. Well, I may not have had any more than somebody else, but I did try to repair most of them.

DR. BARLOW: It seems that the Philadelphia interne whom I casually mentioned got the greater part of the discussion of this paper. I want to say that I did not present that as a scientific fact. It was only a little story that he told me; but we hear these many times.

Now, as to the immediate repair of cervical tears, I want to state that there are contraindications; but if you get contraction and retraction of the uterus, and you are clean and do your work well, you will get results. I do not believe cervical tears heal spontaneously. I have seen quite a number of lacerations in examinations in my office that had healed spontaneously; they all had scar tissues, and in that scar tissue are nerve filaments that give reflex symptoms.

I must say that I think there is something wrong with Dr. Meriwether's technic, or he would get a greater percentage of cures.

In repairing perineal tears, as Dr. Wood stated, if it is not done right, if it is done in a hurry—and that is one of the unfortunate things in obstetrical work—they leave pockets and clots and get infection and neuroses. The catgut becomes absorbed or sloughs out, and of course they do not get results. I have seen many of these cases and examined them where the patient would say: "Well, the doctor took a few stitches." I have seen the doctor "take a few stitches," generally two or three in the skin of the perineum and everything on the inside left just as it was before.

THE REPAIR OF PERINEAL LACERATIONS.*

By H. D. Wood, M. D.,
Fayetteville, Ark.

I wish to include under this title all lacerations of the lower third of the vaginal outlet, as the anterior portions of this canal are often lacerated during labor, and too often over-

*Read before the Thirty-fifth Annual Session of the Arkansas Medical Society, at Fort Smith, May 3-6, 1911.

looked by the medical attendant. It is just as essential to the woman's comfort and well-being in after years that these anterior tears should be repaired as those involving the perineum. Then the anterior lacerations can be more perfectly repaired immediately after labor than later on, as the lacerated parts can be more accurately brought together by a few well-placed sutures.

"The woman who goes down to the fiery gates of death to bring to life a new-born soul" deserves the best care that can be given her by the members of our profession. It is our duty then to examine carefully the vaginal outlet of every woman after labor, and see if there are any lacerations. "While it has ceased to be a disgrace to allow a laceration of the perineum, now the disgrace is to allow the laceration to go unrepaired."

If we are pressed for time, we may sometimes try to ease our conscience with the thought that these tears will heal up and not be noticed by the woman later on. Sometimes these anterior lacerations injure the parts in such a way as to deprive her of much of the comfort and enjoyment of life that of right belongs to her, especially so if the laceration involves the bulbous portion of the pudendum. When these tears are properly repaired the parturient woman is not so liable to have a puerperal infection—a condition that always makes one feel like somebody has blundered.

We should go prepared to repair these injuries when called to attend a woman in her confinement. We need to have in our obstetric bag a pair of long dressing-forceps, an artery forcep, two pairs of scissors, one curved on the flat, a good needle holder, some suitable needles (and I want to say that I have not found a needle that suits me any better than Emmet's spear-pointed perineum needle), one or two round-pointed curved needles, silk ligatures and some silk-worm gut ligatures. In some homes you will need to have with you two or three granite iron wash basins of the same size. All these things can be carried in the buggy without much bother.

When you find a laceration that should be repaired, put your instruments and sutures in one basin with sufficient water, and invert another basin over this and put it on the stove to boil. By the time you get the patient in position across the bed or on the table, and the parts well cleansed, your instruments are sterilized. You can then pour

the water from the basin with the instruments into the one used for a cover, and as soon as you cleanse your hands you are ready to do the operation.

If the patient is on the bed, have an assistant sit on each side of her. Flex her thighs on the abdomen and the legs on the thighs, with instructions to keep the patient's limbs in this position, as this position will make it much easier for you to place the stitches. To sit on a low stool will facilitate your work when the patient is on the bed. Sponge the parts again with the antiseptic solution. Then introduce two fingers into the vagina and press the posterior vaginal wall backward and with the long dressing-forceps introduce a half yard or more of the sterilized gauze. Should this gauze tampon not stop the flow of blood, it would be well to look for a cervical tear. Trim away all the ragged and uneven tissue, as this will give a better opportunity to get union by first intention. If there are any anterior lacerations they should be repaired first, using a round-pointed needle and silk ligature. It is not necessary to place these sutures so deep in the tissue, as these lacerations are easily held in place and the wound soon heals.

Should the perineal laceration extend up the vagina, it is best to begin placing the sutures at the upper angle of the tear, using silk for those that lie within the vagina, as silk sutures are not so uncomfortable as the silk-worm gut sutures inside the vagina. Pass the needle into the tissue near the margin of the laceration, then deep enough into the parts to pick up sufficient tissue to bring the wound well together. Then commence to introduce the external sutures at the posterior part of the laceration, using the silk-worm gut. Introduce the needle near the skin margin of the laceration and pass it deep enough to pick up plenty of the perineal tissue or torn ends of the levator ani muscle, and bring it out at the bottom of the wound; then reintroduce it on the opposite side, bring it out as near on a level as possible with the point of introduction, otherwise you will not be pleased with the appearance of the parts when the sutures are all tied. Begin to tie these sutures in the order of their introduction.

Should there be a complete laceration involving the sphincter ani muscle, the needle should be introduced deep enough to pick up the perineal tissue and torn ends of the levator ani muscle and brought out in front of

the mucous membrane of the bowel, then inserted on the opposite side in front of the mucous membrane of the bowel and passed deep enough to pick up the torn tissues and torn end of the levator ani muscle, and brought out near the skin margin opposite the point of insertion. Commence at the upper end of the tear to place these sutures, and pick up the torn ends of the sphincter ani muscle with the two last stitches introduced. When a sufficient number of sutures have been introduced, commence to tie the upper ones first. When all the sutures are tied, do not forget to remove the vaginal tampon, or you may be embarrassed by neglecting this matter, as well as subjecting the patient to some annoyance and possibly some danger.

Cleanse the parts well with a weak bichloride solution or sterile water, and leave a 1:5000 bichloride solution to moisten sterilized clothes or gauze pads to apply to the vulva, with instructions to change when soiled. The sutures should not be removed sooner than the eighth day, nor later than the tenth.

We are indebted to the eminent specialist, Thomas Addis Emmet, for the perfected technic in secondary operations for lacerations of the perineum. He added to the brilliant achievements of American surgery by his successful operations on these old lacerations, stimulating other surgeons to do these operations, thereby bringing comfort and happiness to many suffering women. And Emmet's operation will continue to be practiced, notwithstanding the fact that numerous operators have had their names attached to a modified form of his method.

It was my privilege to assist one of my confreres in doing this operation nearly thirty years ago. While it took a slight stretch of the imagination to make out the wings of a butterfly on the denuded parts by this young surgeon, yet the operation was as successful as any of us could hope for now, with no better knowledge of asepsis than we possessed at that day.

I shall only refer you to any recent work on gynecology for the preparation of the patient and the instruments necessary to do a successful secondary operation on these old lacerations.

As this is an operation that means much to the comfort and well-being of the woman who has suffered from such an injury, it behooves us to exercise our best skill in re-

storing these injured parts to their normal condition.

Your chairman asked me to include in my paper the prevention of perineal lacerations. The time was when the doctor was ever to keep in mind "support the perineum," but now it seems to be "shall the perineum support the doctor?" We sometimes meet the doctor who says he never has a perineal tear that needs to be repaired. I must confess that I do not know what we are going to do with him. I think it likely that such accidents will continue to occur while the world stands. In fact, I believe these injuries will increase in frequency rather than diminish. Yet, I think we can sometimes prevent these injuries, or lessen their extent, when they do occur. Some women bear children without any noticeable lacerations.

When the perineal body is rigid and unyielding, two fingers can be introduced into the vagina during the absence of a pain, pressing backward and stretching the parts with some benefit. Chloroform can be given until there is some relaxation of the perineal body and muscles, or, if thought necessary, it can be given to complete anesthesia. When the head is passing the perineum it can be gently pressed forward with the fingers of one hand, while the perineum is supported with the other, but do not use force enough to produce an anterior laceration. When you find it impossible to deliver the head without a laceration, it is better to make an incision at the place you prefer than to have a tear occur where you may not want it. This incision can be made with a small bandage scissor during the absence of a pain. It is much easier to repair than a ragged laceration.

I would like to leave this thought with you in your efforts to prevent a perineal laceration: Never get in too much of a hurry while the head or shoulders is passing through the perineum, unless the child's life is endangered by the delay.

DISCUSSION.

DR. E. E. BARLOW, Dermott: I want to thank Dr. Wood for his most excellent and timely paper. His technic is fine and I am glad to hear him uphold the silk-worm suture material. I have had my trouble with catgut, as well as many others with whom I have talked.

There is no difficulty in repairing a perineal or any laceration of the vaginal outlet, if it be done as thoroughly as when we repair a laceration of any other part of the body. If you leave small pockets, suppuration follows with sloughing of the material, etc. The doctor said he repaired a great

many of his cases on the bed. I would prefer a table if one could be had, because it puts the patient in a more comfortable posture and puts the operator in better position to do his work. I find that I get better results by giving all these cases an anesthetic. Sometimes we have tears running in different directions, and sometimes it is necessary to do a quilting operation, and if you have a very nervous patient you cannot do that without an anesthetic. It would be much better and safer for the patient, and give the doctor a much better chance to close the wound well.

DR. WOOD: I had thought that my paper would be more freely discussed, and probably rather severely criticised. I did not say all that I wanted to say, for I did not want to take up too much of the time of the society. I think short papers are the best. To repeat again, I would say, place the parts as nearly in apposition as possible, get all the blood checked, get everything in good condition and hold the stitches in such a way as to bring the parts well together. As Dr. Barlow has suggested, if you do not do that you have a blood-clot formed there, and your operation will be a failure. You will subject the woman to an operation later on in life when she may fall into the hands of some other doctor who may criticise you in an unfavorable sort of way. Now, you want to avoid that. It is a good thing to avoid criticism by your medical brother. It is a good thing for you to do your work in such a way that you will not need to have that criticism. But it is a great deal better thing for you to do the work in a right sort of way so that you may know that your patient is relieved. I prefer that above any sort of adverse criticism that my medical colleague may bestow upon me. So, when you go to place those stitches, don't be in too much of a hurry about it, and yet I sometimes am guilty of that. Yet I admit those things ought not to be so. We need to put the patient in a good light, and do not be afraid of distending the parts in such a way that you may see the utmost extent of the tear, it doesn't make any difference how far up the vagina it extends. Hold the parts in such a way as to place your stitches in such a way as to bring the parts well together. Pass your needle in such a way as to dip it down into the tissues. If you take just a glancing bit of the tissue, what do you do? You just bring the parts together? Well, you do not bring them together. You cannot do it. It is a physical impossibility to do it. But if you dip the needle into the tissues deep enough, have it thickened in the center of the wound, you bring the parts well together and your operation will be a success. Now, let us try to do this work better than we have been doing it, and let us examine these cases more carefully than we have done before. If I can impress that thought upon your mind, that you may give relief to those who suffer so much for us, then I have accomplished all that I desire.

ADDRESS OF DR. L. C. McVAY, PRESIDENT, DELIVERED AT THE SECOND MEETING OF THE CRITTENDEN COUNTY MEDICAL SOCIETY, HELD AT EARLE, OCTOBER 3, 1911.

We are now having our first meeting as the Crittenden County Medical Society. We hope to have many more successful meetings, and do much toward the advancement of medicine in our county.

Physicians are organized to promote professional brotherhood and mutual improvement by discussing questions relating to medicine. The society offers opportunity for social intercourse.

To quote from our constitution and by-laws, the purpose of our organization is: "To extend medical knowledge and to advance medical science; to elevate the standard of medical education, and to secure the enactment and enforcement of just medical laws and to promote friendly intercourse among physicians; to guard and foster the material interests of its members and to protect them against imposition; and to enlighten and direct public opinion in regard to the great problems of state medicine, so that the profession shall become more capable and honorable within itself and more useful to the public in the prevention and cure of diseases, and in the prolonging and adding comfort to life."

We get to understand each other better, and working together we are able to do much more for the community in which we live than we could working separately. We can often find help in the society for the solution of many difficulties that come in our professional life. Our object should be to relieve pain and suffering wherever found.

The Medical Society of the State of Arkansas has accomplished a great deal in the past for the betterment of the physicians, and people of the state as well. Better medical colleges are required, higher requirements for admission of students to the colleges, elevation of medical standards generally, medical legislation affording the public instruction on medical subjects.

Post-graduate work in county societies has been taken up generally. A few years ago a young man could spend three or four months for two years at any kind of a medical college and receive a diploma to practice medicine. No matter what his literary qualifications were, he was called a physician. Now we must spend four full terms, after having special literary training beforehand. New subjects are coming up all the time—they must be handled by the county society—and unless we are organized we will not be able to handle them properly.

The organization will be better and have more and stronger influence the greater the number of physicians belonging. Medical organization stands for broad-mindedness and was never intended for a selfish enterprise—

nor is it for any special class or set of physicians.

We are thought by some to be members of a gigantic trust, and our members thought to make black list of delinquent debtors and make fee bills. The society is thought by some to discuss mysterious secrets that are kept alive by the society and explained to none except physicians.

It is against the law of the organization to make any fee bill. We have uniform constitution and by-laws, which, with a few modifications, govern every county society in the United States. It is also against the law of the organization to advertise—I am sorry to say that some physicians have so far forgotten themselves as to lend their assistance to advertising nostrums that would be a disgrace to one not supposed to have any knowledge of medicine. Advertisements of nostrums and all kind of patent medicines have appeared in the newspapers endorsed by physicians.

Commercialism has been winked at by members of the medical profession. Public and professional opinions are pointing with the finger of scorn to the physician who will sacrifice the welfare of a human being for the sake of selfish gain.

It is a shame and disgrace to any physician who allows the love of financial gain to dominate him so far as to advertise himself in the newspapers or by other means as though he expected patients to come to him as they would to a bargain counter. No one who has a half-column advertisement in a newspaper, advertising the wonderful cures he has made, the exceptional and costly instruments he possesses, all sorts of guarantees to cure, and no money paid until cured, is worthy the name of physician.

There are frauds in the medical societies as well as there are frauds in every organization. We will find generally that the membership represents men of the highest standing. It will not be long before the majority of people employing a physician will ask whether he is a member of the regular medical society. In our county we want to enlist every eligible physician in the County of Crittenden as an active member of the organization.

We are developing one of the best agricultural counties of the state, or county is growing rapidly in population. In ten years' time nearly all of our lands will be in cul-

tivation, and growing much more cotton and corn to the acre than it is today. We are developing in many ways—why should we not grow a good, healthy medical organization? We are making a good beginning. We cannot estimate too highly the importance of small beginnings, however simple the means employed, where genius is the hand-maiden.

Ephraim McDowell organized his clinic in his kitchen with a howling mob raging at his door, vowing vengeance if the outcome was unsuccessful. Now his grave is marked by a column of Virginia granite that simply perpetuates his name to a grateful world.

Marion Sims began his work of relieving suffering women in the fields of Alabama under very unfavorable circumstances. He undertook the work of relief with a dismal prospect, for the representative surgeons of the world only offered palliative treatment. Four women submitted to treatment in his first rude hospital in a stable in his back yard. After many attempts and failures he was rewarded by a glorious triumph. Without anesthesia, and without the use of a fine hospital, he was able to cure these women.

There is a full course of post-graduate work for county societies. We could not do better than to take up some such work. I hope we will have the hearty coöperation of every physician in the county in our society. Regularity and punctuality in attendance are necessary to a good society.

It is one of the duties of the medical society to interest the public in their affairs and their work generally. The public is and should be interested in the prevention of malaria and yellow fever. They are interested in the prevention of typhoid fever by vaccination. They are interested in the diagnosis and cure of the hookworm disease. Everybody wants it stamped out. Great interest is taken by the public in the cure and prevention of tuberculosis. When the people see what can be done they will lend their assistance. In many places committees have been appointed to devise ways and means of preventing tuberculosis. Laws have been enacted in some states making it a finable offense for spitting in public halls and on sidewalks, also laws have been passed against the use of public drinking cups. We have but to show the public that many diseases and much sickness can be prevented, and we will have their sympathy and their coöperation.

THE JOURNAL

OF THE

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All communications to this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the State. Notice of deaths, removals from the State, changes of location, etc., are requested.

ADVERTISING RATES.

A schedule of rates will be furnished upon request.

CHANGE OF ADDRESS.

Change of address will be made if the old as well as the new address be given.

ANONYMOUS COMMUNICATIONS.

No anonymous communications will appear in the columns of this Journal, no matter how meritorious they may be.

NOTICE.

All changes of address should be sent to Dr. C. P. Meriwether, secretary of the State Society, as he furnishes the mailing list each month of our members. All communications for publication should be sent to the editor not later than the 5th of each month.

Editorials.

MORE ABOUT THE NATIONAL LEAGUE FOR MEDICAL FREEDOM.

In order that our readers may be thoroughly posted concerning the organization and purposes of the National League for Medical Freedom, we intend to publish from time to time every bit of information that will give them enlightenment concerning this league. It is believed by those in a position to know that but for the operations of the league in this state, Arkansas would today have on its statutes a model public health law.

Such a bill was passed by the last legislature, but after its passage it suddenly disappeared and no trace of it has yet been found. The only opposition to this bill was made by this league, and it is reasonable to presume that when the Arkansas Medical Society, representing the people, presents another bill to the next legislature for passage, that it

will have to combat this organization. Now is the time to educate the people concerning the dark and sinister motives of this un-American institution.

We are reproducing below an editorial which appeared in *Collier's National Weekly*, of June 3, 1911, which should be committed to memory by every member of the Arkansas Medical Society:

LIBERTY.

Protests from readers have greeted our criticism of the League for Medical Freedom. Also a protest is telegraphed from the California branch of the league. In the minds of most of those who protest, the principal objections are to the following positions taken by us: 1. That the league contains the kind of men who opposed the pure food act. 2. That the activities of the league are against public welfare and frequently surreptitious. Our answer follows:

1. B. O. Flower, one of the nine founders of the league, and now in his second term as president of it, was president of "the R. C. Flower Medicine Company" from 1885 to 1899. R. C. Flower is the notorious quack and general humbug whose latest arrest was as late as 1908. B. O. Flower wrote the league's pamphlets on "Bubonic Plague" and "The Compulsory Medical Inspection of School Children." His views on patent medicine are often expressed. For instance:

"I believe that a great majority of the proprietary medicines are infinitely less dangerous to the public than the majority of regular doctors' prescriptions."

2. C. W. Miller, second vice president of the league, was also one of the founders. In his newspaper, which publishes patent medicine advertising, he has constantly fought the medical profession. Last year one of his addresses against what he calls a "doctor's trust" was delivered to the Dairy Association in Baltimore. We may say in passing that Collier's does not believe in freedom to sell tuberculous milk any more than it does in freedom to sell tuberculous meat.

3. Mrs. Diana Belais, a director and also a founder, has appeared before in this paper as president of an anti-experiment society, a well-meaning, ignorant, reckless and muddle-headed agitator. We are officially informed by the chairman of the "Committee on Publicity and Education" of the league that Mrs. Belais was made a director "because of her courageous efforts to secure a higher law in New York State than the doctors' cruel theories and professional arrogance." Here's to anti-experiment, meningitis, diphtheria and freedom!

4. Dr. C. S. Carr, who is on the advisory board, edits a pseudo-medical sheet. Collier's long ago printed a letter signed "The Peruna Medical Company, per Carr." As editor of "Medical Talk for the Home," he carried advertisements of many of the medicines exposed in Collier's in our series on "The Great American Fraud." He is now editor of the Columbus Medical Journal, which he at once turned from an ethical sheet into a sheer fraud. Look at the issue of May, 1909. On the front cover is a picture of Carr himself writing: "All drugs are poison. All druggists are poisoners." On the reverse side is an advertisement beginning: "Prescribe Antikamnia and Codein tablets in la grippe, headaches, etc." Hurrah for freedom and Peruna!

5. George P. Englehard, who is on the advisory board, has for a long time in his journals defended the patent medicine interests.

6. Charles Huhn, also a member of the board, is a prominent officer in a coöperative patent medicine concern.

7. Another founder was a member of the advertising agency which is now spending for the league the money which it puts into its advertising campaigns.

The league says it did not oppose any "sanitary or quarantine laws." This statement requires some hardihood, as the hearings of the Senate Committee on Health, and more especially of the House Committee on Foreign and Interstate Commerce, show. It would interest us to know whether the league can point out a single health bill introduced in Congress which it has not opposed. When the leaders wish to oppose a sanitary or quarantine law they do it on the ground that such a law would indirectly "lead to compulsory and discriminatory legislation."

The league was nominally born recently, but those who make it up had already as individuals, and even as organizations (such as the Colorado League for Medical Liberty) opposed state and national legislation. A pamphlet published by the Colorado branch singles out Collier's for attack, and was written by a notorious quack doctor. In California, which was the special theme of our former editorial, if the league should prevail, the next threat of bubonic plague would be carried out, instead of being suppressed like the last; smallpox might again become a serious epidemic; school children would bear their ills as best they might. A bill was introduced ordering that the Board of Health be composed of two "allopaths" (a school which does not exist, but is a hostile term for regular physicians), two homeopaths, two "eclectics," two osteopaths. It did not pass!

Some leading homeopaths and osteopaths, be it said, are in favor of a national health bureau and strongly against the agitations of the league. Dr. Francis B. Kellogg, president of the California State Homeopathic Society, in an address recently said: * * * "In my opinion there is an effort being made to exploit the homeopathic profession by influences and interests which are indirectly but radically opposed to the welfare not only of practitioners of medicine in general, but to that of humanity itself. I refer to the effort to enlist homeopathic support for the so-called National League for Medical Freedom."

Plato complained that in his day doctors made too sharp a distinction between the body and the mind. In our day the best class of physicians frequently recommend faith cure and Christian Science, and the Emmanuel movement is an indication that it is possible for science and religion to work together in healing. Few mere observers rate the benefits that Christian Science has brought to the community more highly than we do. A belief which so frequently brings about an actual improvement in character, disposition, bodily health and mental atmosphere deserves the most serious recognition, even by those who regret its hostility to the progressive science of medicine. It is possible, at times, for clever designers to use members of any faith for disastrous purposes. When R. C. Flower was at the height of his career, in 1907, as manufacturer of diamonds, vender of fake mining stock, wearer of most ingenious disguises, traveler under assumed names, and general artist in gold bricks, he conceived the idea of playing for profit upon the earnest beliefs of the followers of Mrs. Eddy. One of his accomplices, a woman, who also used an assumed name, worked

the game with him, and when Dr. Flower, alias Mr. Cortland, took up the cudgels in defense of Christian Science, without being requested to do so, he said:

"Not that I am one of its disciples, but I like to see everyone free to practice medicine as he wishes."

Here we have the very words themselves from old Doc Flower. Up with freedom!

Everybody who believes in "freedom" in medicine is within his natural and political rights in supporting this league. Collier's, not believing in this species of "freedom," is also within its rights in treating the league as a menace, the make-up, bias and purpose of which ought to be fully understood.

DR. J. L. GREENE.

The Arkansas Medical Society welcomes to Arkansas Dr. J. L. Greene of Illinois, who was recently appointed superintendent of the Arkansas State Hospital for Nervous and Mental Diseases. The following from the *Illinois Medical Journal*, August, 1911, is a merited tribute to Dr. Greene, and attests to the good judgment of the Charities Board in making the appointment:

DR. J. L. GREENE.

Dr. J. L. Greene, who has been since 1905 a resident of Illinois, and who was chosen for his well-known ability to bring order out of the chaos then existing in the Kankakee Hospital, and who on January 1, 1910, was appointed for a five-year term as alienist member of the State Board of Administration, has tendered his resignation from the latter position, to take effect September 1, 1911. It is understood that Dr. Greene leaves to organize a modern institution at Little Rock, Ark., and that he will be appointed professor of nervous and mental diseases in the State University, located in that city. During his residence in Illinois, Dr. Greene has made for himself an enviable reputation as a man of mental strength and unusual administrative ability. We regret very much that conditions in "poor old Illinois" are such that Dr. Greene cannot see his way clear to remain in the state. The medical profession of Illinois is sadly deficient in men of his character. The impression he has made on the general public is well expressed by the editorial which appeared in the *Springfield State Journal* of July 26, 1911, which we copy herewith:

"STATE LOSES STRONG MAN.

"The resignation of Dr. J. L. Greene from the State Board of Administration is a loss of no small consequence to the commonwealth. In a large measure the success attending the work of that experimental body can be attributed to his knowledge and efforts. Dr. Greene brought to the board a fund of information which has been of priceless value to the institutions of the state. While he was designated as the alienist of the board, his work has covered the entire field of that body's activities. His advice has been sought on all sorts of subjects connected with the institutions and his fellow-members, as well as those directly in charge of the state wards, have come to have a great respect for his judgment. The retiring member of the board is going to Arkansas, where he will assume responsibility for the management of the state's hospital at Little Rock, in connec-

tion with a professorship in the state university. He is well equipped for such a task, for he combines with excellent professional attainments the practical ability of a well-informed business manager. It is a rare combination."

ANNOUNCEMENT.

We are glad to announce that arrangements have been made with Hon. R. L. Floyd, by which he is to contribute a series of articles on Forensic Medicine, the first installment to appear in the December number. Mr. Floyd is a member of the Little Rock Bar Association, a profound thinker and facile writer, and we predict that his articles will not only be read with interest, but prove of great value as well.

The study of Forensic Medicine is sadly neglected by physicians, and the purpose of these articles is to stimulate interest in this very important department of medicine. Every physician should have at least a working knowledge of the basic principles of medical jurisprudence, and should be able to properly conform his relations thereto. To occupy the witness stand in some criminal or civil suit is almost certain to be the lot of the physician at some period of his professional career. The prime and supreme intention of testimony is to convey facts to the jury; the physician who is grounded in the principles of legal medicine not only is of invaluable service to justice, but reflects credit upon his profession.

TULANE ESTABLISHES A SCHOOL OF TROPICAL MEDICINE.

A "*School of Tropical Medicine and Hygiene*" has been established by the Medical Department of the Tulane University of Louisiana, and will be conducted as one of the departments of that great institution. Dr. Creighton Wellman, one of the leading authorities on medical zoölogy and tropical diseases, has been selected as head of the school. Dr. Dyer, the progressive dean of Tulane, is to be congratulated on taking this advanced step in preventive medicine.

Editorial Clippings.

THE MEDICAL PROFESSION OF THE STATE AND THE ANTIVIVISECTION AGITATION.

The medical profession does not need to be reminded that a notoriously misguided and potentially harmful attack upon the science of medicine has been conducted in this state during the past five years by the antivivisectionists. Nor does it need to be informed that, in spite of extraordinary efforts, remarkable alike for determination and misrepresentation, no legislative recognition of their contention has thus far been secured. Four successive legislatures have refused to grant their demands for restrictive legislation, and all but one have declined to report out of committee the bills which the antivivisectionists have caused to be introduced.

That an agitation of some extent has been created in the state by the antivivisection campaign is not denied. But the volume of the agitation has to be gauged by the sum of the credulous persons who have been brought, chiefly through exaggeration and misrepresentation, to look with suspicion, or even horror, upon the means at present employed to extend the boundaries of medical knowledge, and of the considerable number of better informed and more reasonable persons who, appreciating the gravity of the subject, have endeavored by educational means to limit the advance of this mischievous propaganda. Unfortunately, this resistance has not been applied generally throughout the state, so that a considerable body of our people are still subject to exploitation by the antivivisectionists.

This movement has flourished because in the past the medical profession has felt a considerable degree of contempt for the objects and aggressions of the antivivisectionists, and has thus done very little, generally speaking, to combat their activities. The inevitable result has been that the floods of sensational and false literature distributed

throughout the state, and the wholly misleading exhibit which purports to illustrate the cruel and inhuman manner in which experiments on animals are conducted, have been permitted to impose their poisonous doctrines upon a sensitive but credulous public. We may, therefore, under the circumstances, feel a high degree of confidence in the intelligence and moral sense of our people who have so largely resisted this unopposed propaganda, and we may rejoice in the fact that almost no influential newspaper has come to espouse the antivivisectionists' cause, and that both our federal and state legislators have hitherto refused to enact special laws relating to animal experimentation that might come to deprive medical science of its most important and certain means of advance.

The time has now arrived when we, in our capacity of conservators of the public health and welfare, may have to take a more positive position in resisting the advance of the antivivisectionist movement, which, left so largely to unrestrained operation, has employed ever more questionable and insidious methods of achieving its evil ends.

The methods adopted by the antivivisectionists to secure attention throughout the state and to obtain consideration before legislative committees are diametrically different. When operating in the state at large they rely, as experience has taught them they must rely, to secure recruits, upon perversion and exaggeration of fact regarding the manner and purposes of animal experimentation, and upon a general denial of the benefits accruing from modern medical research. On the other hand, when they are in the presence of legislators, they acquit the leaders in medical science of any suspicion of cruelty and proclaim their belief in the triumphs of experimentation; yet they urge that special legislation is required to protect the interests of the animal creation from cruel and useless exploitation by these same persons who alone, under the present law of this state, are permitted to experiment on animals. Moreover, it is the aggressive and radical societies that are responsible for such antivivisection agitation as exists in the state; and the professed purpose of these societies is first to secure by law restriction and then abolition of animal experimentation altogether.

These disingenuous tactics have never, in the history of the antivivisection movement in this state, been so much in evidence as now, when the foes of medical science are demand-

ing from the legislature a commission to investigate the practice of vivisection. Let it be remembered that the persons and organizations supporting this measure are those which have unsuccessfully besought successive legislatures to regulate animal experimentation by a system of licenses and inspections, and by specifications of the purposes to be subserved by, and the manner of conduct of experiments, regulations that would be in the highest degree pernicious, and would take the control of a method of the utmost importance to human welfare, and one requiring special knowledge and skill, out of the hands of experts who possess these qualifications and would place it in charge of those who have not this technical knowledge and skill. Not those who know, but those who do not know, would be given a discretion which surely would prove disastrous to the future of scientific medicine.

It is idle to argue that no harm could possibly come from such a commission and that its deliberations would forever quell this disturbing agitation. Forty years ago this plausible argument led the English medical profession to accept, first, a royal commission of inquiry that acquitted the investigators, and then, later, fastened upon them a restrictive and highly injurious law that has proved a severe blow to British medical research; but the agitation was thereby abated not one jot and has waxed ever greater and more insistent, until English investigators have been obliged to spend almost their best energies in protecting from annihilation the fragments of freedom for research that they still possess. No proper means must be spared, no honorable effort left unexpended, in preserving this state and this country from such disasters as have overtaken England and from the benighting and blighting grasp of the antivivisectionists.—Simon Flexner, M. D., in *New York State Journal of Medicine*, May, 1911.

ANOTHER INTERFERENCE WITH THE FREEDOM OF CATTLE.

This dispatch from Jackson, Miss., appears in a recent issue of the *Natchez News*, regarding the efforts being made in Yazoo County to suppress the cattle tick:

"The quarantine placed on cattle from Yazoo County appeared to have little effect until the stockmen of that county awakened to the realization that their stock would not be admitted to the Mississippi State Fair, at Jack-

son, during the latter part of the month. The embargo stung the farmers and they decided to take some drastic measure to eradicate the dreaded tick."

The *News* then gives the proceedings at a meeting of the City Council, where strenuous measures were urged to wipe out this blot on the fair name of Yazoo County, and to permit her cattle to appear at the State Fair. This is right, nor would anyone object to any measures which the Jackson City Council might adopt to rid the cattle of disease. But, incidentally, how many human beings are there in Yazoo County, Mississippi, today who are suffering from tuberculosis and typhoid fever, for example? Nobody knows! Will there be any quarantine against the people of Yazoo County on that account? Oh, no, they can all go to the fair, and if any of them are suffering from these diseases, they can communicate the infection to others without hindrance. If one cow died of foot-and-mouth disease in Yazoo County tomorrow the fact would be known in Washington in twenty-four hours, and live stock inspectors would immediately invade Yazoo County. How many women and children died in that county last year? Nobody knows! They are only human beings, not live stock, and in a majority of the states in the Union and in all of the Southern states, the state pays no attention to the birth or death of a human being. A blooded calf or a pedigreed colt has its birth carefully registered, but the birth of a child is not worth recording. And when it comes to dying, if you are a human being, you can die whenever you like. The state has no money to waste in such "scientific nonsense" as finding out how many of its citizens have died during the past year, or whether the death rate in Mississippi is growing or decreasing, or what diseases are killing its people. But ticks in cattle—that is a different matter. The cows must not be kept away from the State Fair.—*Journal American Medical Association*, October 21, 1911.

IS POPULARIZATION OF SCIENCE ADVISABLE?

The present-day tendency is to exploit in the press and the magazines all matters of general scientific interest in such a way as

to allow the general public to believe it understands them. On the other hand, it is a question whether the old saying of Pope to the effect of the danger of a little knowledge does not still hold good. One may see an illustration in the attitude toward any new thing in the development of preventive medicine. Those who have no inkling of knowledge of the matter read accounts from various sources and form opinions which they are entirely willing to offer without charge to any who will listen to them, not excepting the ever-ready reporter. In the main, however, these opinions are expressed in a tentative and rather questioning way, while in the case of those who have not only read of the matter, but who have some more or less distant connection with the administration of the process the development of authority is much greater. Because a man, for instance, is a chemist, or a civil engineer, or connected in a business capacity with some institution dealing with matters of scientific medicine, he does not hesitate to rush in with opinions based on a very complete ignorance of actual conditions, and to draw conclusions from these same baseless opinions. One may remember that the same poet continues to the effect that shallow draughts intoxicate the brain, and in light of the fact that the age is so much one of specialization that it is impossible to be accurate in a wide range of activities without special education, the ultimate end of these unqualified experts seems at least problematical, for it is quite impossible that they should be able to acquire sufficiently large drinks of knowledge to sober them again. The main danger is, of course, in that the mass of the people have no opportunity for personal investigation in these matters and the authority which appears to hang on the words of an official, even though the appointment be a purely political one, leads them to believe the wildest statements. It would be a shock to many to be compared with the Italian peasantry who have been mobbing the physicians combatting cholera, but the reason for their action is much the same as that of those in this country who oppose matters already proved elsewhere to be conducive to the general health of the community.—*Cleveland Medical Journal*, September, 1911.

Communications.

POWERS OF COUNTY BOARDS OF HEALTH—OPINION BY ATTORNEY GENERAL.

Little Rock, Ark., November 10, 1911.

To the Editor:

Recently I received a letter from Dr. F. B. Young of Springdale, who desired to know the powers of a county board of health under the existing laws. His letter was forwarded to Hon. W. H. Rector, Assistant Attorney General, with a request for the desired information. As this matter is of general interest, I am requesting that you publish Mr. Rector's opinion.

Yours truly,

MORGAN SMITH,
Secretary State Board of Health.

MR. RECTOR'S OPINION.

November 9, 1911.

Dr. Morgan Smith, Secretary State Board of Health, City:

Dear Doctor Smith—I beg to reply to your favor of the sixth, enclosing communication from Dr. F. B. Young, Springdale, Ark., under date of October 26. Dr. Young desires to know just what powers the county boards of health may exercise under the existing health laws of this state.

Section 574 of Kirby's Digest enumerates the powers that can be exercised by county boards of health. That section reads as follows:

"The said County Board of Health is hereby authorized to order the seclusion or the isolation of any person or persons, and any person who shall fail or refuse to obey the order of said board, and who shall be found exposing himself in such a way as to transmit any contagious or epidemic or dangerous disease, or injure the lives or health of the county, shall be deemed guilty of a misdemeanor, and upon conviction fined in any sum not less than ten dollars and not exceeding one hundred dollars, and may be imprisoned in the county jail not exceeding ten days; and, provided further, the county board is authorized to prosecute said offender or offenders without bond for cost."

So far as I am informed, our court has never construed this section of the law. I am of the opinion that under it county boards of health have considerable discretion, and that discretion should be exercised by the adoption of such means as a scientific study of the conditions seem to demand. You notice that the delegation of authority applies to the seclusion of any person affected with any contagious, epidemic or dangerous disease which is communicable in its character.

Sections 1455 to 1457 of Kirby's Digest provide for the payment of certain expenses by the county court, where the same are incurred in the suppression of smallpox.

I think the authority of the county board is limited in that there seems to be no provision for the exercise of any powers until persons are found in the county affected with some epidemic

or communicable disease. In other words, there seems to be no provision to guard against the occurrence of such disease by removing nuisances or requiring that all premises be kept in a sanitary condition. You will remember that the State Board of Health and the city boards of health exercise these powers.

Yours truly,

WILLIAM H. RECTOR,
Assistant Attorney General.

Miscellaneous.

The Health-Conscience and the Drink Problem.

—In the United States there are about 1,500,000 deaths each year from all causes, and if we allow 10 per cent of these to be of alcoholic origin, we get annually 150,000 dead from drunkenness. Let us now get some of our figures together: We have seen that each year drink is the exciting cause of 28,000 fatal cases of tuberculosis and the destroyer of 150,000 homes; the cause of 40,000 cases of insanity and 35,000 epileptics; the chief factor in the production of 125,000 criminals; the direct cause of 1,000,000 shipwrecked lives; the direct or indirect producer of 1,000,000 paupers; the chief contributing cause of thousands of cases of syphilis; the seducer of an untold number of young women, and the most important factor in producing and promoting prostitution. And finally drink each year adds to our mortality lists 150,000 lives. And most of these 150,000 dead from alcohol are males and very many of them men in or near mature manhood.—Chas. B. Johnson, M. D., in *Illinois Medical Journal*, September, 1911.

The Treatment of Pneumonia Based on the Elimination of Sodium Chloride.—An analysis of the urine of a pneumonia patient shows almost constantly absence of sodium chloride. I have found that the administration of potassium nitrate in full doses causes the sodium chloride to reappear in the urine within a few hours, and to continue present in quantity as long as the potassium nitrate is given.

The effect upon the course of the pneumonia is remarkable. The temperature almost invariably begins to fall within a few hours and continues to drop until it reaches normal. The physical signs remain for a few days, and then resolution begins and goes on to recovery without crisis, that is, the temperature falls by lysis, and there is no critical period or sudden change such as ordinarily occurs in the course of the disease. There is also complete absence of the depression which commonly occurs at or about crisis, and the patient progresses to an uneventful recovery. In a few cases a very early and mild crisis has been observed.

I interpret these conditions and results to be due to the early and gradual dissociation of the constituents of the exudate, caused by the salt free diet and the "dragging out" from the exudate of the sodium chloride, by the administration of potassium nitrate.

If we base our treatment upon this theory, the management of an ordinary case would be as follows: An initial purge, the administration of potassium nitrate in large doses. I have given sixty grains in solution every three hours for the first day, decreasing the dose somewhat each day, without the slightest disturbance of the stomach. The diet should be as nearly salt free as possible.

With the idea of dilating the arterioles of the pulmonary vessels as much as possible, to increase the circulation through the hepatized lung tissue, to promote the release of sodium chloride from the

exudate, I give nitroglycerin from one hundredth to one fiftieth grain every three hours. If the cough is severe, codeine relieves as well as anything and without bad effects, and it also relieves pain and restlessness. Expectorants have little or no effect.

Stimulation is purely a matter of judgment. I believe that more patients are overstimulated than the reverse. Alcoholic patients often require alcohol to lessen delirium.

A pneumonia patient requires more oxygen to make up for the limited amount of lung tissue that is undamaged, and therefore nothing short of a constant supply of fresh outdoor air will suffice. If the patient is cyanosed, or if respiration is not sufficiently slowed by outdoor air, then oxygen should be administered for from five to fifteen minutes every hour from the beginning. Its use should not be delayed until cardiac failure and pulmonary edema begin.

Other substances may be found which will promote the elimination of sodium chloride better than potassium nitrate, but this treatment has given such surprising results in the hands of several members of this society that I present it to you. In all, twenty-five or thirty cases have been reported. I do not know whether this treatment will be equally effective in bronchopneumonia.—H. G. Hughes, M. D., in *New York Medical Journal*, September 9, 1911.

Disseminated Miliary Tuberculosis of the Skin an Important Sign in General Miliary Tuberculosis of Infancy.—W. Tileston (*The Archives of Internal Medicine*, July, 1909) reports his observations on a specific eruption which occurs frequently in miliary tuberculosis of infants. It is seen sometimes in patients who do not show a tuberculin reaction, and when present is of greater prognostic value than the positive tuberculin reaction, which occurs in so large a percentage of children of the lower classes. The eruption in question indicates almost certainly a fatal outcome. This eruption is due to the deposit of tubercle bacilli in the skin. The bacilli reach the skin by means of the blood current. The rash consists of scattered discrete papules which at the beginning are the size of pinheads and are soon capped by tiny vesicles with cloudy or purulent contents. The vessel ruptures or dries up and its place is taken by a crust. The lesion is about two or three mm. in diameter and consists of a flat papule, only slightly elevated, of a dull red color, often glistening. The center of the lesion is marked by a sharply defined hollow. Rarely the lesions may be vesicular, but they also show the characteristic hollow. The majority of the spots occur on the buttocks, genitalia and adjacent portions of the thigh. The author reports seven cases.—*Boston Medical and Surgical Journal*.

Radical Cure of Hydrocele by the Insertion of Catgut.—Whitney, in the *Boston Medical and Surgical Journal*, says that the treatment of hydrocele by means of catgut inserted into the cavity of the tunica vaginalis possesses many advantages over older and better known methods. This method has the advantage of being less toxic than carbolic, less painful than iodine and more certain than either of them. By it an inflammation of the sac is immediately produced, and as the fluid resulting from this is slowly absorbed, an adhesion of the walls occurs with obliteration of the sac and a permanent cure of the disease.

The patient should be prepared as for tapping, but instead of the small trocar used for this purpose, the author prefers the Coley instrument which has a little larger lumen and which has also a

small inner tube which can be attached to a hypodermic syringe. This is of great value in case we wish to use carbolic where failure to introduce the gut has resulted. The sac is punctured and the instrument is held by an assistant. The dry sterile gut is held by the operator's right hand and the trocar removed, having the cannula in position. Through this, as rapidly as possible, the gut is fed in until all has entered the cannula. The tissues of the serotum should be grasped beyond the cannula and by a little practice that portion of the gut still in it can be drawn into the sac and the fluid allowed to flow out. The cannula is removed, and should any of the gut be found outside of the serotum it can be cut off close to the skin and drawn in as already mentioned. The opening should be sealed by collodion or by adhesive plaster. No pain at all is produced by the insertion of the gut.

In about four to six hours a dull aching begins in the serotum, which increases gradually as the inflammatory fluid is formed, until at the end of twenty hours it is moderately painful. This increases up to forty-eight hours and rarely requires an opiate.—*American Journal Dermatology*, October, 1911.

Appendicitis and Operations.—The whole difficulty in determining the time to operate in appendicitis is largely the difficulty in diagnosis. It is impossible to determine by the physical signs as to the nature of the individual attack, for example, whether the appendix is gangrenous or not. The pulse, temperature and leucocyte count are all useful clinical guides, but neither these nor the severity of the pain, nor of reflex symptoms of vomiting, etc., are sufficiently characteristic to assist in differentiating the simple cases from those of the most dangerous form, and until an accurate clinical diagnosis can be made our only safe course is to remove the appendix the moment a definite diagnosis of appendicitis is made. There may be some instances where the general condition of the patient, or his surroundings may necessitate delay, or may cause one to conclude that the direction of least risk lies in temporizing, but these cases are exceptionally rare.—Alexander Primrose, in the *Cleveland Medical Journal*.

Unexpected Results of Treatment of a Syphilitic Child by Injection of Its Mother with "606."—Karl Taege (*Munch. Med. Woch.*, August 16, 1910) recounts the treatment of a new-born baby of a syphilitic mother, through the milk of the infected mother. The child was weak, apathetic, and hardly able to cry. After the injection of the mother improvement of the child began at once. It became rosy and strong, cried aloud, and nursed normally.

Robert Duhot (*Munch. Med. Woch.*, August 30, 1910) reports the case of an infant born with hereditary syphilis, in whom an absolute disappearance of all symptoms was obtained by the treatment of the mother with an injection of "606." This was an altogether unexpected result. The action of the drug was carried in some way to the child through the mother's milk. The mother had been rebellious to mercurial treatment, and was subject to severe ulcerations. Her child was born with red, wrinkled skin, and the appearance of an old woman; the cry was weak and suckling was difficult on account of snuffles. A few days after birth syphilitic pemphigus appeared. The mother was injected with 0.5 gm. of "606." Three days after the injection the appearance of the child began to change. The skin lost its redness and became soft and white; the eruption vanished, as well as the nasal catarrh. The child was soon a rosy, blooming baby, and gained rapidly in every way. It has

been questioned whether even better results would not have been obtained by a direct injection of the child. Injection of the infant syphilis has just as good an effect on the symptoms, but unfortunately the amount of toxin that is liberated by the death of the organisms causes it to fall and die. Ehrlich has warned us of this result. It is believed that the antitoxin produced in the blood of the mother is communicated to the child by way of the milk, through which a neutralization of the toxins takes place. We must always consider that the unskilled spirochetes may revive and renew the symptoms. Therefore, it is wise to inject the child, as soon as it seems allowable, with a small amount of the drug. The Wassermann reaction will be of use here. The best method of treatment of a nursing is by treating the mother and allowing the milk to do the work of cure.—*American Journal of Obstetrics*.

Origin and Prevention of Puerperal Fever.—A. Döderlein (*Munch. Med. Woch.*, August 16, 1910) says that there are two sources of puerperal infection; the bacteria contained in the vagina of the patient herself, and those that are brought to her from without, by her physician and attendants. The bacteria that live in saprophytic form in the vagina by their interaction are a protection against bacteria from without, through their production of lactic acid. If we find in a puerperal woman that the normal bacterial condition of the vagina is altered, then we must exercise care to prevent fever. It has been the custom to disinfect the vagina before labor by means of a vaginal antiseptic injection. By this means we remove the natural bacteriological protection in the vagina, and at the same time make the mucosa so dry that it is much more likely to be injured during childbirth. The author, with the assistance of the physicians in charge, made investigations in the hospitals for women in Tübingen and Munich, of the results of douches and of absence of douches before labor. In one hospital 1-1000 corrosive sublimate was used in 500 women, in the other 1½ per cent lactic acid was used in another 500 women, and in each case a comparison of the results was made with another 500 women who received no douches. On comparing the percentage of fever cases with and without douches it was found that there were more cases of fever when douches were given than when they were not. This shows that disinfection of the vagina is harmful rather than beneficial. As to the other source of infection, the hands of the examiners, it has been found that there is no way of positively removing all bacteria from the skin, especially when the hands are made harsh by work; but if we use very thin rubber gloves carefully disinfected with live steam, we shall be just as well able to feel the vagina and cervix and we shall be incapable of bringing bacteria from without. Therefore, it is the opinion of the author that rubber gloves should be used in all cases of labor, thus avoiding the complications that do not occur when delivery is attempted without vaginal examination.—*American Journal of Obstetrics*.

The Use of Oil in Abdominal Surgery.—Wilkie (*Surgery, Gynecology and Obstetrics*, February, 1910), on the basis of an experimental research, supplemented by some clinical observations, concludes that the surgeon may feel justified in advocating the introduction of oil into the peritoneal cavity after operation for the relief of old-standing adhesions; in operations for localized or diffuse peritonitis where handling of the viscera is unavoidable; for operations for generalized peritoni-

tis to favor subsequent drainage and intestinal peristalsis.

The last indication he thinks is the most positive one, since thus adhesions will be prevented for a few days at least, thus allowing the purulent exudate to find its way down to the pelvic drain and so escape. Moreover, the general lubrication favors intestinal peristalsis. In one clinical case two ounces of sterile vaselin oil was poured into the abdomen at the conclusion of operation for perforation in a partially gangrenous cecum which had herniated through the foramen of Winslow, and in which, at the operation, considerable exposure and handling of the intestines was unavoidable. Death occurred thirty-six hours later, when the intestines were found non-adherent and covered with a thin film of oil.

In a second case of acute general peritonitis incident to a ruptured appendix, pus and fibrin being found covering the liver and under surface of the diaphragm, the same procedure was carried out. The patient passed flatus a few hours after operation and exhibited none of the symptoms of intestinal paresis.—*Therapeutic Gazette*.

County Societies.

JOHNSON COUNTY.—The regular monthly meeting of the Johnson County Medical Society was held at Clarksville, November 6, 1911. The following members answered to roll call: J. S. Kolb, president; Annie Hays, vice president; L. A. Cook, secretary; J. L. Stewart, G. L. Hargraves, S. M. Graves, W. R. Hunt, E. H. Hunt.

Dr. W. R. Hunt reported that the Johnson-Franklin County Medical Society, at its October meeting, expelled Dr. Post of Altus for unprofessional conduct.

Dr. S. M. Graves reported an interesting case of "Epidemic Cerebro-Spinal Meningitis."

Dr. E. H. Hunt reported a case of "Osteo-Myelitis of the Clavicle of a Baby Nine Months Old."

Dr. W. J. Hunt read an interesting paper on "Osteo-Myelitis," which was discussed by all the members.

At the next meeting, which will be held in December, Dr. W. R. Hunt will read a paper on "Erysipelas."

L. A. COOK, *Secretary*.

CRITTENDEN COUNTY.—The second meeting of the Crittenden County Medical Society was held at Earle, Tuesday, October 3. The following members were present: L. C. McVay, Marion, president; T. S. Hare, Crawfordsville, secretary; J. T. Haden, Crawfordsville, vice president; A. C. Parker, Clarksdale; J. H. Mathews, Earle; J. M. McBee, Earle; S.

J. Knott, Crawfordsville; W. R. Blue, Par-kin; J. V. Satterfield, Earle; J. B. Blue, Par-kin; W. P. Hicks, Earle.

The society was organized September 4, and the next meeting will be held at Crawfordsville, November 7. The program will include a symposium on "Pellagra."

THOS. S. HARE, *Secretary*.

MISSISSIPPI COUNTY.—The next meeting of the Mississippi County Medical Society will be held at Blytheville Tuesday, November 14, at 1 o'clock p. m.

PROGRAM.

1. "Acute Malaria with Simple Tertian Infection, Diagnosis and Treatment"—Dr. W. H. Borum, Blytheville.
2. "Chronic Malaria, Diagnosis and Treatment"—Dr. T. F. Hudson, Luxora.
3. "Remittent Type, Diagnosis and Treatment"—Dr. W. T. Polk, Blytheville.
4. "Pernicious Form, Diagnosis and Treatment"—Dr. C. M. Harwell, Osceola.
5. "Algid Type, Diagnosis and Treatment"—Dr. T. F. Taylor, Osceola.
6. "Hematuria, Diagnosis and Treatment"—Dr. H. F. Crawford, Wilson.

In accordance with Section 1, Chapter III, of the by-laws, our annual meeting will be held December 12, for the purpose of electing officers.

O. HOWTON, *Secretary*.

Book Reviews.

Manual of the Diseases of the Eye.—For students and general practitioners. By Charles H. May, M. D., chief of clinic and instructor in ophthalmology, College of Physicians and Surgeons, Medical Department, Columbia University, New York, 1890-1903; attending ophthalmic surgeon to the Mt. Sinai Hospital, New York; consulting ophthalmologist to Bellevue Hospital, to the French Hospital, to the Red Cross Hospital and to the Italian Hospital, New York. Seventh edition, revised, with 362 original illustrations, including 22 plates with 62 colored figures. Published by William Wood & Co., New York. Price, \$2.00.

The sixth edition of this manual appeared in 1909 and was reprinted in 1910. In this edition the work has been considerably revised, quite a lot of matter has been added to the more important subjects, such as "Trachoma Bodies," "Lagrange's Operation for Glaucoma," "The Use of Salvarsan ('606') in Syphilitic Ocular Affections," "Injection of Tuberculin and Krönlein's Operation." The new chapter on "The Ocular Manifestations of General Diseases" is of

special value to the student and the general practitioner. Under this chapter the author details the ocular manifestations in the different systemic diseases, such as syphilis, tuberculosis, rheumatism, nephritis, diabetes, cardiac affections, infectious diseases, etc., making the book of special value to the general practitioner.

A Treatise on Diseases of the Nose, Throat and Ear.—By William Lincoln Ballenger, M. D., professor of laryngology, rhinology and otology in the College of Physicians and Surgeons, Chicago. New (third) edition, thoroughly revised. Octavo, 983 pages, with 506 engravings, mostly original, and 22 plates. Cloth, \$5.50, net. Lea & Febiger, Philadelphia and New York, 1911.

This, the third edition of this work in only a few months, shows its popularity with the profession. And, as its author states in the preface, it was designed as a text-book for students, as a guide for the practitioners, and as a reference for specialists—all of which it does in a concise manner. We bespeak for it an even greater success than the former editions.

Differential Diagnosis.—Presented through an analysis of 383 cases. By Richard C. Cabot, M. D., assistant professor of clinical medicine, Harvard Medical School. Octavo of 753 pages, illustrated. W. B. Saunders Company, Philadelphia and London, 1911. Cloth, \$5.50, net.

This work is unique, and in a class by itself when compared to any work on differential diagnosis that we are familiar with. It is a work that should be on the table of every physician, regardless of his specialty.

Collected Papers by the Staff of St. Mary's Hospital.—Mayo Clinic, Rochester, Minn., 1905-1909. Octavo of 668 pages, illustrated. W. B. Saunders Company, Philadelphia and London, 1911. Cloth, \$5.50, net.

As the name implies, it is a collection of papers read before various medical societies, and the majority have been printed in various medical journals. The feature of the work that will appeal to all is the manner in which it is indexed, and makes it a ready reference book to the busy surgeon. It will be well received by the profession.

Books Received.

International Clinics.—A quarterly of illustrated clinical lectures and especially prepared original articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene and other topics of interest to students and practitioners. By leading members of the medical profession throughout

the world. Volume III, twenty-first series, 1911. Philadelphia and London, J. B. Lippincott Co., 1911. Price, \$2.00.

Diseases of the Stomach, with Special Reference to Treatment.—By C. D. Aaron, Sc. D., M. D., professor of gastro-enterology and adjunct professor of dietetics in the Detroit College of Medicine. Cloth. Price, \$4.75 net. Pp. 555, with forty-two illustrations. Philadelphia, Lea & Febiger, 1911.

Anatomy.—A manual for students and practitioners. By John F. Little, M. D., of the Jefferson Medical College, Philadelphia. New (second) edition, enlarged and thoroughly revised. 12mo, 491 pages, with seventy-five engravings. Double number. Cloth, \$1.50 net. The Medical Epitome Series. Lea & Febiger, Publishers, Philadelphia and New York, 1911.

The Parasitic Amebas of Man.—By Charles F. Craig, M. D., captain. Medical Corps, United States

Army. From the Bacteriologic Laboratory of the Army Medical School, Washington, D. C., and the Rockefeller Institute for Medical Research, New York. Published with the authority of the surgeon general of the United States Army. Cloth. Price, \$2.50. Pp. 253. Philadelphia, J. B. Lippincott Co., 1911.

Electricity; Its Medical and Surgical Applications, Including Radiotherapy and Phototherapy.—By Charles S. Potts, M. D., professor neurology, Medico-Chirurgical College; formerly instructor in electro-therapeutics and associate in neurology, University of Pennsylvania, Medical Department, Philadelphia. With a section on Electrophysics, by Horace Clark Richards, Ph. D., professor of mathematical physics in the University of Pennsylvania, and a section on X-Rays, by Henry K. Pancoast, M. D., professor of Roentgenology in the University of Pennsylvania, Medical Department, Philadelphia. With 356 illustrations and six plates. Lea & Febiger, Philadelphia and New York, 1911.

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CONTENTS.

Original Articles:

- Etiology and Pathology of Appendicitis, by J. P. Runyan, M. D., Little Rock..... 179
Symptomatology and Diagnosis of Appendicitis, by William V. Laws, M. D., Hot Springs..... 184
Medical and Surgical Treatment of Appendicitis, by Oscar Gray, M. D., Little Rock..... 193
Headaches of Ocular and Nasal Origin, by John G. Watkins, M. D., Little Rock..... 196

Editorials:

- Little Rock's Campaign for Better Health..... 197
Medical Bandits in Arkansas..... 197
The Passing of Decker..... 198
Dr. McCormack to Visit Arkansas..... 198
Notice..... 198

Editorial Clippings:

- The Gentle Art of Heckling Public Servants..... 198
Vital Statistics..... 199
Feeding in Fevers..... 200
The Marriage of Whites and Blacks..... 201
The New York Academy of Medicine vs. Fee Splitting..... 201
The Vender of Intellectual Nostrums..... 202

Department of Medical Jurisprudence

- By Hon. R. L. Floyd, Little Rock..... 202

Communications:

- Indiana Doctor Desires to Move to More Pleasant Fields..... 203

- Miscellaneous..... 203

Reports of Medical Societies:

- Pulaski County..... 208
Washington County..... 209
Johnson County..... 209
Franklin County..... 209
Third District..... 210
First District..... 210
Tri-State (Arkansas, Louisiana, Texas)..... 211

- News Items..... 212

- Personals..... 213

- Reading Notices..... 213

- Book Reviews..... 213

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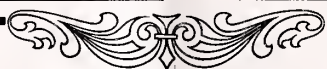
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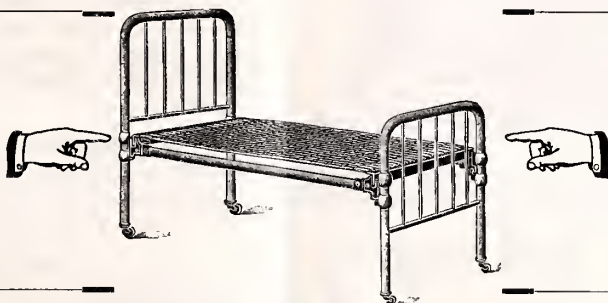
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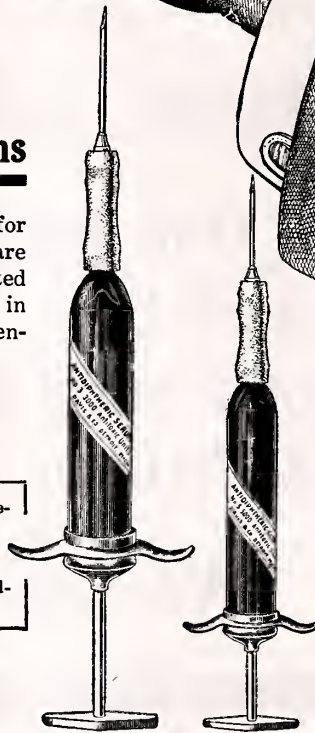
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Original Articles.

ETIOLOGY AND PATHOLOGY OF APPENDICITIS.*

By J. P. Runyan, M. D.,
Little Rock.

A thorough understanding of the embryology and physiology of the small and large intestine is necessary in the study of the etiology of appendicitis. In embryology, function is more permanent than form. The stomach and duodenum to a point two inches above the common duct opening, as well as the liver and pancreas, are derived from the foregut and receive their blood supply from the coeliac axis. Their principal function is the preparation of the food material for absorption. Mayo claims that it absorbs but little.

The small intestine morphologically begins at the pylorus, but functionally its commencement is a few inches below the opening of the common duct into the bowel. Morphologically it terminates at the ileo-cecal valve, but functionally it embraces all the derivatives of the midgut from the middle

of the duodenum to the splenic flexure of the colon. All this territory is supplied by the superior mesenteric artery, and is concerned principally in the absorption of food.

Morphologically, the large intestine begins at the ileo-cecal valve, but functionally as a reservoir of solid fecal matter it begins at the splenic flexure of the colon; the sigmoid, rectum and anus are embryologically derived from the hind-gut, and are supplied by the inferior mesenteric artery. The descending colon is a passageway between the functionally active midgut and the passive sigmoid, and is usually empty. The sigmoid with its traplike curve acts as a fecal container.

Most of the solids are digested in the jejunum and ileum, and over half the fluids are absorbed by their vessels. The remainder of the digestible solids undergo conversion into soluble substances, and these and the remaining fluid substances are absorbed in the large intestine between the cecum and the splenic flexure. They are retained there, not by the ceco-colic sphincter which, in the human adult has disappeared, but by physiological muscular contractions. This accounts for the localized cecal distention with gas and fluids in digestive disturbances. The fluids ingested as well as the fluids of the hepatic and the pancreatic se-

*Read in the Section on Surgery at the Thirty-fifth Annual Session of the Arkansas Medical Society, held at Fort Smith, May 3-6, 1911.

cretions keep the ingesta in a thin solution and in close contact with the absorptive structures of the small intestine (the valvulae conniventes) and assist in floating the residue into the cecum. There the fluids are no longer needed and their absorption takes place. Here also a chemical change, due to bacterial action, from alkalinity to acidity occurs in the material entering the large intestine. This change causes formation of gases, irritation of the lining mucosa by acids, factors which play an important part in the further progress of the residue in the intestine as well as in the development of pathological disturbances about the cecum and appendix.

In the small intestine peristaltic movements, excited by chemical and mechanical irritation, from particles of the food, carry the chyme toward the ileo-cecal valve. These movements consist, in the first place, of progressive waves of contraction which affect the circular muscle over a limited area, and which travel forward, tending to carry the chyme with them. The second form of movement is produced by the simultaneous contraction of the circular and longitudinal fibers, and this results in a twisting of the intestinal coils, which tends to bring different parts of the chyme in contact with the intestinal mucosa.

The movements of the large intestine are very peculiar. Cannon, as the result of a study of the movements of the large intestine by means of the X-rays, divides the large intestine into two parts: The first corresponds to the cecum, ascending and transverse colon, in which the movement is that of anti-peristalsis; the second corresponding roughly with the descending colon, in which the contents are moved toward the rectum by peristaltic waves. The food in this first portion is still more or less liquid, and its presence sets up running waves of contraction which, beginning close to the hepatic flexure, pass toward the ileo-cecal valve. The waves occur in groups separated by periods of rest. The ileo-cecal valve, or rather the physiological muscular contraction occurring there, prevents the material from being forced back into the small intestine. The valve of this peculiar reversal of the normal movements of the bowel at this particular point depends upon the fact that it delays the passage of the food material toward the rectum and, by thoroughly mixing

it, gives increased opportunities for the completion of the processes of digestion and absorption. We see, therefore, that except during defecation the intestinal movement in this part of the tract is anti-peristaltic, so that fluids introduced into the rectum, as by Murphy's proctocolysis, are carried backward for absorption toward the splenic flexure, only a small amount being taken up by the descending colon, sigmoid and rectum.

At about the eleventh week of fetal existence the cecum arises as a lateral outgrowth. During the subsequent development it continues to increase in size until it forms a conical pouch arising from the colon, where it is joined by the small intestine. The enlargement of the terminal portion does not keep pace, however, with that portion nearest the intestine, but it becomes gradually more and more marked off from it by its lesser caliber, and gives rise to the vermiform appendix. At first the original form of the entire outgrowth is still quite evident, though it is more properly described as funnel-shaped, but later the proximal part, continuing to increase in diameter at the same time as the colon, becomes sharply separated from the appendix forming the cecum of the adult anatomy.

Time will not permit me to enter in detail into the minute anatomy and histology of the appendix. The more salient features of the structure and location bearing on the relation to the etiology of its inflammation are that the appendix is situated at the head of the cecum, that its cavity is continuous with that of the large bowel, and is divided from it only by a more or less inconstant fold, the valve of Gerlach. It is long and narrow and apt to be somewhat curved upon itself. It is a relic of a large cecal pouch still found in the ruminants and other lower animals. Considerable evidence has been advanced that it is gradually undergoing involution.

Ribbert, as the result of the study of 400 appendices removed postmortem, states that at birth the appendix is one-tenth the length of the large intestine, and in the adult one-twentieth. Up to six years of age the normal appendix always contains a lumen, but after this time there always begins an involution with obliteration of the lumen from the tip toward the base. Ribbert states that in adults thirty-five years of age the lumen in 25 per cent of appendices is obliterated,

and at seventy in more than 50 per cent. He found in all of them retrograde and atrophic changes in the absence of any indication of any inflammatory disease. A. O. J. Kelly has found more or less obliteration of the lumen in about one-fourth of his cases. Being an organ, therefore rapidly undergoing involution, we should not be surprised to note that it is a common seat of disease.

On account of its location, the liability of the cecum, as previously shown, to become distended with gas and fluids, the irritation of the mucosa by the acids, the appendix is apt to become a depository for foreign particles and inflammatory exudates. The fact that its musculature is scantily supplied with longitudinal fibers, its dependent position and narrow lumen favor the retention of these substances. A slight inflammation or kinking of the neck will also favor the retention of its contents. Thus the appendix practically at times becomes a culture tube for the various micro-organisms, and the subject of chemical and mechanical irritation. Irregular obliteration producing bands and strictures along the lumen of the appendix is without doubt an important factor in fecal concretions which play an important role in the etiology of appendicitis.

Considerable stress once was attributed to vascular disturbances as causative factors of appendicitis, but in our opinion they have been overestimated. Thrombosis and embolism, with resulting anemic necrosis and subsequent invasion by pathogenic micro-organisms, are of rare occurrence. Brower has shown that the artery of the appendix is not an end artery, but that there is an effective anastomosis in the various coats of the appendix.

The endarteritis and periarteritis assigned by some as the chief cause of appendicitis have not been constantly found, and are not even frequently present. To bring about such a condition, the vascular obstruction would have to be more widespread than that which is generally found. Most pathologists interpret the vascular changes as the result rather than the cause of the inflammation. Kinks or other constrictions of the appendiceal orifice by interfering with the free outlet of blood, may account for edema found in some cases. There was a time when foreign bodies were universally held to be an impor-

tant factor in the etiology. Apart from fecal concretions, foreign bodies are quite rarely found in the appendix, and when present must be considered as accidental occurrences rather than causative agents.

Bell, in between 900 and 1,000 cases operated upon, found foreign bodies within the appendix in only seven, and thinks that probably more than the usual proportion. Fecal concretions consist of fecal material, desquamated cells and leukocytes inspissated in a mucoid matrix, and sometimes infiltrated with calcium salts. They are found in normal appendices, and, in themselves, are comparatively unimportant. It is likely, however, that in appendices already swollen and inflamed, concretions may bring about necrosis through pressure, and, as a matter of fact, they are more frequently observed in the ulcerative and gangrenous variety.

Archibald, in an analysis of eighty-nine cases, found concretions in only three out of thirty-eight non-perforative cases, while in forty-four perforated cases concretions were found in twenty-two. Deaver, in a report of 500 cases of appendicitis in childhood, found nineteen fecal concretions in the appendix, seven fecal concretions in the abscess in a total of ninety-one perforated and gangrenous cases. Concretions probably are an expression of a previous or co-existent inflammatory process rather than the exciting cause of the inflammation, as in the case of biliary calculi where I have shown there must be a preexisting catarrh of the mucosa with exudation and desquamation of cells to provide a nidus for the deposition of salts. Once formed, of course we must expect the presence of the concretions to perpetuate or aggravate the condition.

Deaver, in his 500 cases of appendicitis operated on at an age when the appendix is not involuting, finds that there is a less tendency to the formation of strictures, but that fecal concretions are more frequently found. He holds that enteric fever and intestinal catarrh may predispose to appendicitis. He concludes that appendicitis in childhood occurs in increasing frequency from birth to puberty, a fact which confirms the involution theory. He also holds that all cases of abdominal pain in children should be regarded as appendicitis until

proved otherwise. He finds that, the same as in adults, it is more frequently found in the male than in the female.

One point of great etiologic importance is the fact that the lymphoid elements of the appendix undergo involution along with the other structures. The appendix, at first, is richer in lymphoid elements than the rest of the intestine, the cells being diffused throughout the mucosa or aggregated into follicles. These elements are probably concerned in the manufacture of substances that immunize the body against bacterial infections from the lumen of the bowels. Ribbert has pointed out that this lymphoid tissue is most marked in childhood and atrophies after the thirtieth year of age, except in exceptional cases, where it occurs as early as the twentieth year. The fact, therefore, that the defensive power of the appendix against infections under these circumstances is beginning to wane will explain the greater prevalence of appendicitis after early adult life. However, the most important single cause of appendicitis is infection, the activity of the bacteria being aided by the physiologic conditions and anatomic peculiarities mentioned in the beginning of this paper.

According to Ashhoff, who recently investigated this subject, the disease begins as an enterogenous infection at the bottom of the crypts. This enterogenic infection is favored in many instances by the accumulation of gases and fluid in the overlying cecum. To produce an infection only the slightest epithelial abrasion is required. The bacteria most frequently found are the *Bacillus coli communis*, the *Staphylococcus pyogenes albus* and *aureus*.

The appendiceal inflammation may involve the whole of the organ or only a portion of it. On account of the conditions previously stated, the distal is most frequently involved. It is difficult to classify the different forms accurately, since the types met with pass into one another by imperceptible gradations. The following grouping has been suggested by Adami:

Acute—

Catarrhal.

Diffuse, suppurative or gangrenous.

Ulcerative — Perforating, non-perforating.

Gangrenous.

Specific, e. g., typhoid.

Chronic—

Catarrhal.

Diffuse or sclerosing.

Specific—Tubercular, actinomycotic.

To which I would add:

Tumors—Sarcoma, epithelioma.

ACUTE CATARRHAL APPENDICITIS.

Catarrhal appendicitis may be either acute or chronic. In the acute form the appendix is swollen, the external venules congested, and the organ is often kinked and twisted. The mucous membrane is swollen, succulent, congested with mild hemorrhage. The cavity of the organ contains mucus of a thin nature, a few leukocytes, and there may or may not be concretions. Acute diffuse appendicitis is a more severe form of the disease than the catarrhal type. In this condition all the coats of the appendix are swollen and its peritoneal coat covered with fibrinous exudate. In addition to all features of the acute catarrhal form, there is present a diffuse infiltration of leukocytes throughout all the coats of the organ which gives it a greatly swollen and edematous appearance. There are present more or less small superficial erosions of the mucosa. The cavity is filled with muco-pus, and the meso-appendix is frequently involved in the pathologic process.

ACUTE ULCERATIVE APPENDICITIS.

In this type we always have at a point, corresponding to the location of the fecal concretion, an area of localized necrosis. The depth of the ulcer varies and perforations are not infrequent. Externally, there is always more or less discoloration of the appendix at the seat of the necrosis and the appendix is frequently bathed in pus.

GANGRENOUS APPENDICITIS.

In this form we get a very severe and fulminating condition of either the whole or a portion of the appendix. The appendix undergoes rapid coagulation-necrosis and becomes transformed into a blackish and sloughing mass. The condition may be primary or secondary to the other pathologic conditions of the appendix. It is the result of either the invasion of the appendix by virulent micro-organisms or the result of circulatory disturbances, most frequently an obliterating endarteritis or a constricting periarteritis.

TYPHOID APPENDICITIS.

Typhoid ulceration resembles the typhoid ulcer formed in the lymphoid substance of

the ileum. Here, as in the ileum, it may produce hemorrhage by erosion of blood vessels, perforation or peritonitis.

CHRONIC APPENDICITIS.

Chronic appendicitis may be insidious in its onset or the result of an acute or sub-acute attack. Most cases show a succession of attacks of more or less acute inflammation, in any of which ulceration or gangrenous processes may supervene, endangering the life of the patient, and justifying the prompt removal of the appendix at the first evidence of the disturbance. The chronic as well as the relapsing form is attended with more or less proliferation of connective tissue, producing in some cases induration or stenosis; in other cases complete obstruction of the appendiceal lumen, and at times transforming (sclerosing appendicitis) the appendix into a fibrous cord. Some portions of the coats, when studied under the microscope, show collections of round cells and are therefore in a more or less state of acute inflammation. If the proximal portion of the appendix is obliterated by the sclerosing processes it leads to retention of the secretions as well as inflammatory products so that the appendiceal tube becomes dilated, either in the form of cylindrical or globular cysts. As in other conditions, the contents of the cyst may be serous, mucus, mucopurulent, sanguinous or inspissated. All chronic and relapsing forms of appendicitis lead to the formation of fibrinous adhesions in the neighborhood of the appendix. At times the obliteration of the appendiceal lumen results in spontaneous cure. A favorable result like this should not be expected in every case, and it is not of sufficiently frequent occurrence to justify delaying operation.

SARCOMA OF THE APPENDIX.

According to Jones, sarcoma of the appendix is an extremely rare occurrence. Sarcomata of the round-cell type predominate, next in frequency is the spindle-celled variety. Inflammatory changes, either chronic or acute, of the types described above frequently accompany these neoplasms. The fact that primary sarcoma of the appendix may originate in an inflammatory process is a strong argument in favor of removal of all appendices which show inflammation. Primary carcinomata of the appendix have been reported by Fowler. The growth may infiltrate all the coats of the organ, produce obstruction attended by dilation, cyst formation, etc. The

degenerative changes occurring in this tumor are frequently attended with invasion by bacteria and inflammatory infiltrations of the appendix, producing conditions similar to those discussed above.

The principal danger of appendicitis lies in perforation, which occurs sooner or later in a large proportion of acute cases. If the inflammation is insidious and fulminating in its onset, and protective adhesions have not already been formed during previous attacks, a septic peritonitis will follow. Whenever the organ becomes encased by fibrinous adhesions, perforation of the appendix leads to the formation of a localized abscess, in which, on evacuation, frequently concretions or portions of the appendix are found. If the abscess is promptly evacuated and properly drained, recovery very generally follows. The most favorable cases are those in which dense fibrinous adhesions wall off the diseased appendix from the general peritoneum. The appendix frequently lies behind the cecum pointing upward, and leads to the formation of an abscess in the region of the liver. In some cases the appendix may lie in a peritoneal pocket. Periappendicular abscess may rupture into the bowel, establishing fecal fistulae, or under favorable circumstances may rupture externally. Septic thrombosis of the mesenteric and omental veins are frequent pathologic sequelae of appendicitis, as are also septic portal pyophlebitis and abscess of the liver. Occasionally appendicitis is associated with empyema of the right pleura. Tuberculosis of the appendix does not differ materially from tuberculosis elsewhere.

Recently McCarthy and McGrath have called attention to the possibility of an etiologic relationship between the appendix and pathologic conditions in the stomach, duodenum, bile passages and pancreas. They claim as the result of an investigation of the embryology, anatomy and physiology of these organs, and in view of the clinical experience and pathologic findings in studying the material from 216 gastrectomies, 365 cholecystectomies, 5,000 appendectomies and three duodenal ulcers, that the appendix is at least a part of the etiology of conditions which have been and are being treated as local conditions, but which may possibly arise secondarily. They advocate as the result thereof that the surgeon should remove the appendix in all cases of chronic appendicitis and also in association with lesions in the gastro-

duodeno-hepatico-pancreatico-physiologic system when such an operation can be done with little or no risk to the patient. During all abdominal sections, according to them, the appendix should be removed when such procedure does not materially add risk to the operation. They claim that by this means there is a great possibility of reducing the number of lesions in that physiologic system.

SYMPTOMATOLOGY AND DIAGNOSIS OF APPENDICITIS.*

By William V. Laws, M. D.,
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The general subject of appendicitis has been so thoroughly and frequently discussed before the various medical societies, and so many illustrative and instructive dissertations thereon have appeared in medical literature during the last twenty or thirty years, that it can hardly be expected anything new can be added to what is already before the profession. However, I wish to briefly review the principal signs and symptoms which are to be relied upon in arriving at a correct diagnosis, and shall particularly consider a few important points (observed in my work as surgical consultant) which are not infrequently overlooked or disregarded by the general practitioner and even by the occasional operator.

SYMPTOMATOLOGY.

I desire to make the emphatic statement at the outset, that, in my opinion, appendicitis from its inception is a distinctly surgical disease, and would urge that whenever possible the services of a competent surgeon be engaged in the beginning of the attack to watch developments with the attending physician, in order that the welfare of the patient may be conserved in the greatest possible degree.

I am not unmindful of the fact that invoking assistance of the surgeon is construed by many practitioners, as well as by the laity, to signify the necessity for immediate operative intervention; therefore, his summoning is usually postponed to the last possible moment, more often than otherwise to the detriment of the patient.

As early as 1899, Dieulafoy, physician to the Hotel Dieu, Paris, claimed that a patient

should never die of appendicitis, provided an early enough operation was performed; *i. e.*, twenty-four hours after the first symptoms in acute cases with considerable reaction; thirty-six when development was not so rapid. LaPlace, of Philadelphia, ten years ago made the statement that in every case of appendicitis there was a time when, if operated on properly, the patient would recover; in other words, that appendicitis should necessarily have no mortality.

It is manifestly the duty of the attending physician, with the aid of the consulting surgeon (and when I say *surgeon* I do not mean simply an *operator*), to ascertain the time intimated by LaPlace; but ordinarily this cannot be done if the early symptoms are disregarded, or especially if they are marked, as is often the case, by the administration of morphin to relieve, what is termed by the laity, "unbearable" pain. Personally, as a general rule, I would no more think of administering morphin to a patient under my care with suspected appendicitis than to put my own finger into the fire.

It may, however, be found necessary at times to resort to small doses of morphin in order to allay an intense abdominal pain in certain cases of appendicitis, employing just sufficient to moderate the patient's acute sufferings. It may, therefore, be conservatively stated that both active purgation with salines and the affording of rest to the bowel by huge doses of opium or morphin are factors (from the medical side) that decidedly and unfavorably modify the outlook (Anders).

There has been a decided tendency in the past among certain diagnosticians to regard every pain manifested in the ileo-cecal region as having its origin in inflammation of the vermiform appendix. Such attacks of discomfort have oftentimes remained uninfluenced by operative intervention (appendicectomy) because they did not really originate in disease of the appendix. Tumefaction of the lymphoid tissue of the appendix early in the history of typhoid fever may produce a fairly accurate clinical illustration of appendicitis.* Gastric ulcer, sarcoma of the cecum, cholecystitis, intestinal obstruction, so-called "bilious" colic, acute indigestion, salpingitis, renal calculus, ovarian cysts and many other

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*The *ascaris lumbricoides* may induce symptoms closely simulating those usually noted in appendicitis. Such a case is recorded by Arbori-Rally (Archiv. de med. des Enfants).

diseases have been diagnosticated as appendicitis, the true pathology being only revealed at operation or necropsy. Intestinal neurosis simulating appendicitis is not unknown, and mucous colitis may be mistaken for appendicitis. However, according to Hawkins,¹ the greatest source of error is entero-spasm occurring in the cecal region and descending colon. It may produce definite attacks of acute pain, but oftener appears as a dull, more or less vague discomfort, sometimes lasting for months, and is usually referred either to the left or the right iliac fossa; in the latter event it is apt to lead to a false diagnosis of chronic appendicitis, and in the former to one of disease of the sigmoid flexure.

Armstrong² claims that in some cases of appendicitis the exudate lies immediately above or below the entrance to the pelvis, so that it is chiefly the pelvic peritoneum that is involved. Such instances are oftentimes overlooked since McBurney's point is not tender, nor can any considerable pain be elicited by pressure anywhere over the abdomen.

The early diagnosis of even typical appendicitis in the male subject, contrary to the opinions and teachings promulgated by numerous authors who have previously written upon the subject, is not always particularly easy of accomplishment, since practically there may exist no symptoms which may be regarded as strictly pathognomonic or invariably characteristic of the malady. As a matter of fact, many instances have been encountered where the most experienced, erudite and painstaking clinicians were unable to arrive at a satisfactory ante-operative diagnosis. This may have been due to either one of two causes: (1) The comparative absence of symptomatology characteristic of the disease, or (2) owing to marked changes in the normal topography of the structures involved in the pathological process.

Cumston³ points out the great variability in anatomical relationship which the appendix may assume, and the difficulties arising in diagnosis under such circumstances. He classes these abnormalities under three headings:

(1) Those due to adhesions occurring during fetal life and giving rise to intraperitoneal or extraperitoneal appendicitis, subhepatic peritonitis, or to perinephritic or perihepatic abscesses, and those cases of appendicitis in hernial sacs in the male or female pelvis.

(2) Those due to malformation or displacement of the cecum and the appendix.

(3) Those due to an altered relationship between the appendix and the cecum, when the former either from excessive length or mobility may give rise to an encysted or generalized peritonitis, or by becoming folded under the cecum (outside the peritoneum) may cause pus to travel toward the kidney or into the pelvis.*

In some operated cases the appendix has been found greatly displaced; e. g., it is sometimes located low in the pelvic cavity; it may be found in the medium line between the bladder and umbilicus, high in the right side and under the liver and in close proximity to the right kidney; it has even been found in the left iliac region. In either event it must necessarily follow that ante-operative diagnosis may be difficult or even impossible, since the symptoms will, of course, be distinctly atypical and consequently misleading.

Cumston⁴ calls attention to urinary disturbances which may accompany appendicitis and afford a most confusing clinical picture. The exceptional anatomical position of the appendix may bring it in relation with the bladder behind the pubes, or it may be found low in the pelvic excavation or the cul-de-sac of Douglas. This relation to the bladder may cause functional disturbances without pus formation, such as retention of urine, tenesmus, dysuria, or an acute or subacute cystitis. Suppurative lesions may also occur, or there may be formation of urinary calculi.

Swartz (Cumston, l. c.) refers to a young man of twenty who had three attacks of appendicitis terminating in abscesses, which were opened in the umbilical region. Each time in addition to the ordinary symptoms of appendicitis there was violent pain on urinating, and also frequent micturition. The patient himself called attention to the similarity in the symptoms experienced in the previous attacks of appendicitis, and at operation the appendix was found in the form of a cord surrounded by indurated omentum extending from the iliac fossa to the abdominal wall, midway between the umbilicus and pubes in close relation with the bladder.

In other examples, proven by operative intervention to have been appendicitis, only a few of the commonly observed symptoms were at any time present. There was no elevation

*According to Cumston, no single symptom can be considered pathognomonic, the diagnosis having to depend upon a consideration of all the symptoms together with the history, and a warning is given against placing too much reliance upon pain, rigidity and hyperesthesia about McBurney's point, since in a great number of cases the pain is exclusively localized around the umbilicus.

of the temperature, but slight rigidity of the right rectus abdominis muscle, little tenderness at the characteristic point of McBurney, and no serious abdominal pain or discomfort. Of course, the ante-operative diagnosis in such cases can only be reached by the process of elimination and exclusion of other pathologic entities, and in this connection I would urge that especial consideration be accorded the character of the pulse and the leucocyte count as valuable diagnostic points.

VanHook⁵ speaks of "colics of the vermiform appendix," the symptoms of which are sudden, colicky pains in the abdomen without elevation of the temperature; or, if the temperature be elevated it may properly be argued that there are inflammatory processes going on and the case belongs no longer to the category of simple colic. A remote symptom of these lesions of the appendix is to be found in many instances in catarrh of the colon; a mucous colitis is occasionally observed, and is sometimes relieved by removal of the appendix.

Richardson⁶ claims the symptoms which should put the attendant on his guard against typhoid fever are, in the order of their importance: (a) Pain without rigidity; (b) pain and tenderness without rigidity; (c) pain and tenderness without rigidity and without tumor; (d) a history of malaise, headaches and slight fever preceding the pain, even if only twenty-four hours' duration; (e) an initial and sustained temperature of 103° F. or more preceding the pain; (f) increased area of splenic dullness when other symptoms suggest equally appendicitis and typhoid fever; (g) rose spots; (h) normal leucocyte count. Sometimes, says Richardson, the diagnosis cannot be made; the most experienced and careful diagnostician may be misled by the prominence of abdominal symptoms in typhoid into advising operation.

Darnall⁷ records a case in which a Meckel's diverticulum produced symptoms simulating those ordinarily observed in a severe attack of appendicitis. Operation disclosed a normal appendix. Death of the patient followed in two days, and necropsy revealed a gangrenous and ruptured Meckel's diverticulum.

Long⁸ describes a twelve-year-old girl under treatment for chorea. Later she complained of severe pain in the right iliac region. McBurney's point was painful on pressure; the

pulse was 120, and temperature 101.5° F. There was no constipation, no rigidity of the right rectus muscle, and no leucocytosis. Temperature remained 99.6° F. after pain was relieved, and showed this degree every afternoon for three weeks. The muscular contraction did not recur; but there was still decided tenderness on deep pressure over McBurney's point. The general condition gradually improved for two months, when the abdominal symptoms recurred, which yielded to treatment, but returned for a third and fourth time. The fourth attack was followed by an epileptiform convulsion. The diagnosis of appendicitis was made and operation advised. The feces being examined microscopically, dwarf tapeworm eggs were discovered. Under treatment with male fern, the parasite was removed, and the abdominal symptoms mimicking appendicitis failed to recur.

In the adult female accurate ante-operative diagnosis is doubly difficult, owing to the intimate relationship which exists between the vermiform appendix and the right uterine adnexae.* If the appendix be displaced, as frequently happens in the female, due to tight lacing, pregnancy, etc., it naturally follows that pain and tenderness attributable thereto may be located some distance from the normal site, and thus greatly confuse the diagnostician; moreover, because of the anatomical relationship mentioned, should the right Fallopian tube or right ovary become diseased, infection may extend to the appendix virtually by contiguity of structure, and the converse may be equally true. Therefore, accurate ante-operative diagnosis becomes a matter of great uncertainty.

Bland-Sutton⁹ mentions an instance where an inflamed vermiform appendix perforated and discharged its contents into the right Fallopian tube through its celomic ostium. A single woman of thirty suffered pelvic pain accompanied with evidences of acute inflammation, and a tender swelling was detected to the right of the uterus. The diagnosis

*According to Richardson, in many cases of appendicitis the first symptoms are caused by perforation of the appendix, just as in extra-uterine pregnancy the initial pain is caused by rupture of the fecal sac. The material escaping from the appendix may vary in amount and in virulence, according to the size of the perforation, the patency of the appendix, the liquidity of the intestinal contents and the nature of the micro-organisms.

lay between acute salpingitis and appendiceal abscess. A few days later the abdomen was opened by a median subumbilical incision; the appendix was found adherent to the fimbriated end of the right Fallopian tube, which was distended and adherent to the adjacent structures and its lumen filled with pus. A narrow channel led from the interior of the appendix through its wall near the tip directly into the tube. The appendix, which occupied the true pelvis, its tip lying in contact with the tubal fimbriae, became the seat of inflammation which involved the Fallopian tube and led to occlusion of its celomic ostium; the appendix perforated and the morbid matter inundated and distended the Fallopian tube.

MacLaren¹⁰ believes the close relation which often exists between the vermiform appendix and the right Fallopian tube accounts for the frequency with which inflammation in one structure affects the other; and in one hundred of Kelly's operations on tubes and ovaries the appendix was found adherent in twenty-seven, and in seven removal was necessary. Robb also agrees that purulent salpingitis is sometimes due to extension of infection from a diseased appendix.

In the experience of MacLaren (l. c.), out of fifty-eight instances where inflammatory appendages had to be extirpated, the appendix showed sufficient pathology to justify removal in twenty. In nine cases adhesions between the appendix and right appendage were very intimate. He claims, aside from well-recognized attacks of appendicitis, there is an "appendiceal colic" which recurs at each menstrual period; that these are mild inflammatory attacks commonly described by the patient as "taking cold."

Edebohl¹¹ concludes that chronic appendicitis is present in from eighty to ninety per cent of women with symptom-producing movable right kidney; that this frequency constitutes chronic appendicitis one of the chief symptoms of movable right kidney, and some of the symptoms commonly ascribed to movable kidney are often in reality due to the concomitant appendicitis.

The diagnosis of appendicitis during uterogestation is also fraught with numerous difficulties, e. g., the pregnant uterus in its ascent may carry the cecum and appendix far above their normal situs; moreover, the presence of the uterine tumor obviously renders satisfactory abdominal palpation impracticable.

Thus the pain and tenderness of appendicitis, if present, cannot be definitely located in the supposed appendiceal region.

Sheahan¹² claims the diagnosis of appendicitis in pregnancy is difficult for many reasons. A uterine tumor of variable size filling the pelvic and abdominal region offers resistance and prevents palpation. The abdominal muscles are "on the stretch," rendering it difficult to estimate the amount of "guard tension." The intestines are pushed upward, and in one instance (Mixer) the appendix was found at the lower end of the right kidney. In an example recorded by Sheahan the original pain was located at the edges of the liver, and two days later over the bladder. Great difficulty is oftentimes experienced in defining the outlines of the appendiceal tumor. However, according to Abraham, "there is always a certain uniformity in the symptomatology, differing only in the severity of its expression: (a) Almost always a history of constipation; (b) the sudden onset of acute abdominal pain, especially severe in the right iliac fossa; (c) subsidence of the diffuse pain and its localization over the region of the appendix; (d) vomiting."

In the foregoing remarks I have endeavored to illustrate some of the difficulties which may be encountered in arriving at a satisfactory ante-operative diagnosis of appendicitis, based upon the symptomatology which may be present under circumstances and conditions such as those indicated. While the so-called cardinal, or more or less characteristic (not pathognomonic) symptoms observed in the average attack of acute appendicitis uncomplicated with other pathologic entity are well known and understood, it may not be uninteresting to reiterate some of them; but before doing so I desire to express my disagreement with some of the statements accredited to the great Sir Frederick Treves¹³ in relation to appendicitis. According to an abstract before me, he claims that appendicitis does not exist until the peritoneum is implicated; that extensive inflammation of the appendix, thickening of its walls, ulceration, and even stenosis, may exist without symptoms; that the great majority of cases of appendicitis recover spontaneously without either an operation or the formation of an abscess; that the grave cases are rare, and that suppuration is uncommon. It does not appear to me that these assertions can be substantiated, or that they are susceptible of

proof; and certainly in my own experience they have not been borne out by the facts.

Ordinarily the symptoms observed in an acute, uncomplicated attack of appendicitis are about as follows:

(1) Sudden and severe, colicky abdominal pain, not always primarily localized or confined to the right side, but may be referred to the umbilical or gastric region.

(2) Nausea and vomiting usually supervene, and may persist for an indefinite period.

(3) Rarely there may be an initial chill, followed by a distinct rise in temperature and marked acceleration of the pulse.

(4) Generally there is a sudden rise of temperature without initial chill, and the pulse becomes exceedingly rapid.

(5) Great rigidity of the right rectus abdominal muscle, and exquisite tenderness over the characteristic point of McBurney.

(6) The pain becoming more severe, is soon localized in the right iliac fossa.

(7) There may be either constipation or diarrhea in the beginning, but constipation is the rule after the first few hours.

(8) As pain, tenderness and discomfort increase, the patient shows evidence thereof in anxiety of countenance, and the right leg is oftentimes flexed upon the abdomen.

While all these symptoms may not be present in every typical case, the majority of them will usually be found, and they represent collectively a fairly accurate clinical picture of the condition encountered during the first few hours of an acute attack of appendicitis.

DIAGNOSIS.

After having outlined and commented upon the various typical and atypical symptoms commonly observed in appendicitis, there appears little left to be mentioned concerning the diagnosis. However, erroneous diagnoses have been so frequently made in connection with this disease that it may not be amiss to also review that portion of the subject. Probably not a surgeon of experience has not at some time operated for supposed appendicitis and found that the symptoms were produced by some other pathological lesion; but as the accumulated evidence shows, such surgeons should not be criticised therefor by their more fortunate confreres who may or may not have had similar experiences.

Brewer¹⁴ cites eleven examples where erroneous diagnosis of appendicitis was made, op-

eration or necropsy showing other and unsuspected lesions. In two the symptoms were found due to renal calculus; in four, to disease of the uterine appendages; in one, sarcoma of the ileum; in one, to cholecystitis; in one, acute suppurative pancreatitis; and in two, general sepsis. Likewise McCosh (Brewer l. c.) asserts that it is quite impossible oftentimes to make a correct diagnosis before the abdomen is opened, and even then it may be difficult to determine the primary seat of the trouble.

Patterson¹⁵ has published a valuable and instructive paper on appendicular gastralgia, or the appendix as a cause of gastric symptoms, and says in differential diagnosis the chief conditions are those of duodenal ulcer, gastric ulcer and gall stones. He concludes:

"(1) Appendicular disease may give rise to symptoms which closely mimic the supposed symptoms of gastric and duodenal ulcer.

"(2) The prominent symptom is epigastric pain or severe discomfort after food; in many cases there are sour eructation, vomiting, and even hematemesis and melena.

"(3) The radiation of epigastric pain to the lower abdomen is very suggestive of appendicular trouble.

"(4) Gastric analysis reveals in some cases hyperchlorhydria, in others a normal amount of free HCl, in others a marked diminution or absence of free HCl. As a rule there is an increase in the volatile acids, and in some cases evidences of hypersecretion.

"(5) Some cases of hypersecretion or acid dyspepsia, and many cases of supposed gastric or duodenal ulcer, are cases of latent appendicular disease.

"(6) The evidence that the gastric symptoms are due to appendicular disease are threefold: (a) The majority of the patients are cured by appendicectomy; (b) the influence which appendicectomy has on the gastric contents; (c) the frequency of a previous history of gastric symptoms in those who have an attack of acute appendicitis.

"(7) The symptoms are probably the result of intestinal toxemia due to intestinal stasis. The effect on gastric secretion is, in the early stages, possibly due to pyloric spasm, but more probably to some influence of the appendix on gastric secretion.

"(8) Appendicular gastralgia is apparently more common in women than men.

"(9) The important lessons to be learned from these cases are: (a) That no operation should be performed on the stomach or duodenum unless definite organic lesion exists; gastrojejunostomy will not cure appendicitis; (b) that in all operations for supposed gastric or duodenal ulcer the condition of the appendix should be carefully investigated."

Along similar lines Myer¹⁶ concludes an elaborate paper on secondary gastric manifestations in chronic appendicitis as follows:

(1) A careful history should be taken with special reference to the previous existence of acute abdominal attacks, perhaps as far back as childhood.

(2) Primary gastric diseases should be excluded through a determination of the motility of the stomach, careful and necessary repeated examination of the stomach contents, bearing in mind that there may be co-existing lesions in the stomach and appendix, and that in a small percentage of cases the acidity may be greatly increased, simulating ulcer, may be diminished, arousing fears of carcinoma, but as a rule is found within normal limits; in a differential diagnosis careful examination of the feces for blood, and of the urine, and examinations of the blood itself will often throw light upon obscure cases.

(3) Pure gastric neuroses, the expression of a neuropathic tendency, though less common than usually supposed, must be excluded, not forgetting, however, that organic lesions may be encountered in neurotic individuals.

(4) Especial care must be taken in cases of habitus enteropticus (Stillier) not to misinterpret the physical signs often elicited in these cases in both the epigastric and right iliac regions.

(5) Through careful physical examination other organs, especially the abdominal, must be excluded as a causative factor, not forgetting again that two lesions such as gall stones and appendicitis are not uncommon in the same individual.

(6) Lastly, there must be a most careful examination of the right iliac region for positive findings, bearing in mind that in exceptional cases of chronic appendicitis no local signs can be elicited.

On examination of the appendix region one or more of the following signs may be present: (a) Local pain on pressure over McBurney's point; (b) pain radiating toward the epigastrium on pressure over the cecum without perhaps any pain at the point of pressure; (c) epigastric distress and nausea on pressure in the appendix region; (d) Meltzer's sign, which consists in pain produced through the elevation of the right leg of the patient while exerting pressure over McBurney's point; (e) pressure in the left iliac region or other portions of the lower abdomen may cause pain to radiate to the right iliac region; (f) spasticity of the cecum; (g) borborygmus in the cecal region on manipulation; (h) exceptionally, in very slender individuals, the palpation of the thickened appendix; (i) pain and infiltration on the right side occasionally elicited through rectal examination.

Ladd¹⁷ gives as the cardinal symptoms of appendicitis, tenderness and pain, and alterations in the temperature and pulse. Of course, these may vary in their severity in different cases. In one case there may be repeated vomiting, in another high temperature, in another rapid pulse, or in still another

er great tenderness and pain on pressure over the region of the cecum. If any one of these symptoms is very important, it indicates more than simple inflammation of the appendix. Tenderness is of the greatest value as a diagnostic symptom; it is variable and may not attract attention by its prominence in all severe cases, or may not be proportionate in its severity to the extent of the destruction going on in the abdomen. Pain, when severe or persistent, or recurs with considerable severity, is an indication that a more serious condition than simple inflammation exists—that local, if not general, peritonitis is present.

Pain may be deceptive in its location or degree, but if severe and continuous or persistently recurring, it is, taken alone, an indication for operation. Temperature may be deceptive in appendicitis; it remains comparatively low in grave cases, and may mislead by suddenly dropping at a time when gangrene is taking place or pus is emptying into the general peritoneal cavity. A low or moderate temperature should not be interpreted as proof of a mild or safe case. In undoubted appendicitis a low temperature should be regarded as an indication of severe infection and need for early operation. The pulse may remain moderately low and of good quality until late in the progress of a fatal case. A rapid, feeble pulse calls for immediate operation. Persistent recurring vomiting indicates a severe condition; it may, however, be absent in severe cases. Its presence in a persistent and prominent form indicates a grave condition calling for immediate operation.

Lewin¹⁸ claims that by the local application of heat one is able to determine whether an inflammatory process has gone on to supuration, e. g., in appendicitis if pus has not formed, the application of heat will be a comfort to the patient; if pus is present, the pain will increase in severity. Spohr (Lewin l. c.) has had similar experience with hot applications in appendicitis.*

Blumber¹⁹ argues that one of the most important questions that arises in connection with the early diagnosis of appendicitis relates to the degree of participation of the

*This is an ancient theory, and, of course, it is but natural that consideration thereof should be revived in connection with the diagnosis of appendicitis, remembering the diagnostic difficulties encountered in certain cases.

peritoneal covering, and believes he has noted a new symptom, the presence of which points to peritoneal involvement. In a typical case of early appendicitis, gentle pressure over the affected area produces pain, which ceases as soon as the pressure is relaxed; when, however, instead of being gradually withdrawn, the hand that exerts the pressure is suddenly removed, the resilient tissues are thrown into more or less vibration and this itself may produce a pain which the patient can nearly always distinguish from the original pressure pain.

Moullin,²⁰ writing on the significance of pain and tenderness in cases of inflammation of the appendix, says:

(1) Absence of pain is no indication that the most serious mischief is not going on. More than once he has operated and found the appendix on the point of giving way in spite of the patient's protestations that he had never had more than a twinge of pain.

(2) The initial pain of acute inflammation of the appendix which is so commonly referred to the umbilicus is due to the peristaltic action of the cecum or of the appendix dragging upon the attachment of the peritoneum to the abdominal wall. This is especially likely to occur when the appendix is fixed by adhesions, or the mesentery short or twisted upon itself. In one case of inflammation of the appendix in which Lennander was operating under local anesthesia, the slightest traction upon the anterior layer of the parietal peritoneum caused pain, which the patient described as exactly like that which he suffered during an attack.

(3) The cessation of this umbilical pain with improvement in the other symptoms is due to cessation of the peristalsis caused by the inflammation having spread to the muscular coat of the bowel. When this occurs the wall of the bowel is no longer able to contract, and this source of pain disappears. That this is so is shown by the fact that the cessation of umbilical pain is coincident with the formation of a local swelling which at this stage of the disease is due to distension of the bowel and thickening of its walls by inflammatory exudation.

(4) The development of local pain which as a rule precedes by a short time the cessation of the umbilical pain, means that inflammation has spread from the appendix to the parietal peritoneum or to the postperitoneal cellular tissue. These are the only structures concerned (at this period of the disease) which are supplied with nerves capable of transmitting the sensation of pain. Severe pain is of serious import, as it implies either wide extent or great severity of inflammation.

In consideration of the ante-operative diagnosis of appendicitis, as well as other inflammatory and suppurative lesions to which man is prone, I believe the question of hyperleucocytosis should occupy a more prominent place than it has generally heretofore been accorded. Some observers have been inclined to ridicule the idea or theory of hyperleucocy-

tosis in connection with appendicitis, others have placed it in a category of immaterial or unimportant symptoms, still others have attached absolutely no importance to the comparative leucocyte count. In my opinion this is one of the most valuable of the diagnostic signs, particularly in considering the advisability of operative intervention, and should never be overlooked or disregarded. Of course, to be of the greatest value, the blood examinations should be made carefully and repeatedly if necessary.

A rapidly progressive leucocytosis indicates suppuration, and is ominous unless an operation be promptly undertaken, as a general rule. Unfortunately, there may be an absence of leucocytosis, or leucopenia even may be present in the "most severe fulminating forms of appendicitis, indicative of lack of resistance, on account of which fact it has been discredited as a criterion of either acute suppuration or gangrene" (Anders).

According to the views of Joy and Wright,²¹ if the first symptoms of appendicitis are moderately severe, and the leucocyte count high, say over 16,000, operation should be decided upon, and in those cases also where the count is from 12,000 to 16,000, but increasing on subsequent count in from four to eight hours. The operation may be postponed where the count decreases on second examination, though the operation is advisable for the sake of freeing the patient from the danger of subsequent attacks. If the symptoms are moderately acute at first, but become less severe, and the count is moderate and decreasing, operation may not be insisted upon; operation should be performed, however, if the count shows an increase. Should the symptoms be very severe and continue, following a history of severe onset and with signs of increasing toxemia, immediate operation is the only chance left if the count is moderate and decreasing; if it is moderate and stationary with the symptoms moderately severe, the cause not being seen until forty-eight hours or more after the beginning of the attack, operation should be immediate.

Longridge²² believes that hematological examinations are of value in abdominal inflammations in estimating the severity and progress of the affection. Whether a morbid process is of increasing virulence or not is of the utmost importance, and on this question the leucocyte count throws valuable light. A progressive increase in the number of leucocytes

may be taken as evidence that the inflammatory lesion is developing in severity, and may be reaching the stage of pus formation. Of even more importance than the quantitative count is the qualitative estimation of the leucocytosis. In almost every case where the polymorphonuclear cells are increased out of proportion to the other elements, it is very significant of an increasing virulence in the inflammation. In hematological examinations one must always remember that there may be no increase in the leucocytosis in mild catarrhal inflammations of the appendix, also in cases of fulminating appendicitis where the resistance of the patient is too feeble to react to the toxemia. There is also no increase in the leucocytosis where there is an abscess of long standing which is walled off.

Robbin²³ lays much stress upon blood examinations in the diagnosis of suppurative appendicitis, and claims the white blood count will often swing the pendulum in the direction of the diagnosis of one disease or the other. A hyperleucocytosis will at once differentiate a suppurative appendicitis from simple colitis, typhoid fever, ovarian neuralgia, impaction of feces, and floating kidney. Developed during the course of catarrhal appendicitis, it will point to suppuration with as much precision as any of the diagnostic signs in our possession. By means of a blood count pus can be detected within twenty-four hours, and a fatal case be thus converted into a very favorable one. "What other means, says Robbin, have we of diagnosing suppurative appendicitis?" It appears rational, therefore, that a frequent blood count in cases of appendicitis is almost an imperative necessity. In some fulminant cases the advent of fatal toxemia may be so rapid that no increase in leucocytosis is present. Cabot (Robbin l. c.) reports four cases of appendicitis with general purulent peritonitis in which no hyperleucocytosis was found. When, however, examinations are made frequently, such mistakes would in the majority of cases be avoided, for one would always detect the hyperleucocytosis before the organism became sufficiently impressed to fail to react. "With all these facts before us we can hardly fail to appreciate the important role a blood count always plays in the diagnosis of suppurative appendicitis."

Kothe²⁴ states that while a moderately high leucocytosis temperature and pulse speak for

a mild type of appendicitis, a rapid increase of these three factors has a more serious meaning. Any marked disproportion between them is still more significant. Thus, a high leucocyte count (30,000 and above) is always a sign of severe infection; but, inasmuch as it indicates a sufficient power of reaction on the part of the organism, still allows a favorable prognosis. Where, however, the leucocytosis is disproportionately low, and extremely severe infection with poor recuperative power should be feared. If the leucocytosis persists after the operation, or if after a temporary fall it again rises, pus is still present somewhere.

Despite the voluminous writings and lectures upon the subject of appendicitis, in the opinion of Babcock²⁵ there are certain important points that apparently have not received the attention they deserve. One of these has been emphasized by Murphy, and is the importance of the chronology of symptoms in this disease, and that his experience has corroborated the great usefulness of this factor in the differential diagnosis: An attack of appendicitis begins with (a) diffuse abdominal cramp or colic, which is followed by (b) nausea and frequently vomiting, and this in turn is succeeded by (c) localization of the pain with tenderness, and if there be peritoneal involvement, by rigidity over the right iliac fossa; and (d) by temperature elevation, which, however, may not be marked. If the history shows that the symptoms have unfolded in this order, one may unhesitatingly make a diagnosis of appendicitis, and usually will be justified in advocating immediate operative intervention. If, however, the tenderness has preceded the general abdominal colic, pelvic disease, especially tubal or ovarian, is to be considered; and here the suggestion of Morris seems at times of value, that a single distinctly localized point of tenderness to the right of the umbilicus suggests appendicitis, while if two tender points be present, one an inch to the right, the other an inch to the left of the umbilicus, then the symptoms are probably due to disease of the uterine appendages. If the history indicates that fever, even though mild, has preceded the other symptoms, no matter how characteristic these may be, typhoid is to be considered, or pneumonia with peritoneal symptoms. In renal colic the initial diffuse abdominal colic is absent.

Finally, however, it must be conceded that,

so far, as symptoms and diagnosis are concerned, appendicitis does not differ in any essential respect from other inflammatory and suppurative lesions, *i. e.*, that no absolutely inflexible rules can be formulated covering these features, and necessarily each individual case must be considered and studied strictly upon its own merits.

If I have succeeded in directing renewed attention to some of the more important points in connection with the symptoms and diagnosis, the primary object of this paper has been fully accomplished.

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MEDICAL AND SURGICAL TREATMENT OF APPENDICITIS.*

By Oscar Gray, M. D.,
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When I was asked to write a paper on the above subject, I thought it was an easy task, but the more I thought of it the more I realized the importance and gravity of the subject. I have nothing new to offer, either from a medical or surgical standpoint, in the treatment of appendicitis. I first thought of illustrating my ideas of treatment by reciting

cases that have come under my personal observation, but I found it would take too much time and detail.

With reference to the treatment of appendicitis from a medical standpoint, I believe the appendix, once diseased, is never again normal. A patient having had one attack, is predisposed to another. There is no medical remedy, so far as I know, that will cure appendicitis. Why should there be any deception to the patient? He should be told the cold, plain facts and this will give him food to think about.

There are some people who have this disease and will not be operated upon because they have had an aunt, uncle or some friend who was operated upon years ago, and died. It is our duty to advise this class of patients how to prevent the attacks. I usually advise them to take a restricted diet and moderate exercise, to keep the bowels open by having at least one stool a day, and in case they eat something that disagrees with them, to immediately vomit and wash the stomach out with water by the continued process of vomiting until it is free from all the offending material. The patient should further be instructed to stop all food until the stomach is in proper condition, fasting two or more meals if necessary. This, I think, will prevent an attack. I also advise them, in case they feel an attack coming on, to stop all food by mouth and remain as quiet as possible—rest in bed is best; to apply an ice bag to the affected side and take no strong cathartic. If it is necessary to move the bowel, try a low enema. Many patients who have this disease refuse to be operated upon, treat the matter as the young fellow who has his first case of gonorrhea; you can't make them see the serious side of the trouble. So much for the medical treatment.

Discussing the surgical treatment, I believe in operating upon every case at the proper time, provided there is not some grave heart or kidney lesion or some other condition that would make the operation contraindicated. In order to discuss this subject from a surgical standpoint, I will use the following classification:

Chronic recurrent appendicitis.

Acute appendicitis without perforation.

Acute appendicitis, perforated or gangrenous, without abscess.

Acute appendicitis, perforated or gangrenous, with abscess.

*Read in Section on Surgery at the Thirty-fifth Annual Session of the Arkansas Medical Society, held at Fort Smith, May 3-6, 1911.

Acute appendicitis with diffuse peritonitis.

In no division of surgery can we look back and see a greater advancement than in the surgical treatment of appendicitis, and this has all taken place within the past eight or ten years. Men like Ochsner have revolutionized the treatment, and their names will be written upon the pages of history. If I could illustrate some of my own personal cases that are in the above classification, I might be able to explain the plan of procedure to better advantage, but I will not take up your time.

THE CHRONIC RECURRENT FORM.—These cases are nearly always easy to handle, because you can take time to prepare the patient. They come to you with a history of previous attacks, gastric disturbances, constipation, headache and a feeling of general lassitude. They may have fever in a moderate degree during an attack. Such cases I put to bed or make them remain quiet, apply an ice bag over the appendix and stop food by the mouth. I do not give them a purgative. Calomel is positively contraindicated. After they have remained in bed until the fever has subsided to normal, I prepare for the operation by giving them a good size dose of castor oil, especially if I find gas in the bowel or have reason to believe the bowel is loaded with fecal matter. If this is not the case, I order a simple enema to move the lower bowel. Such cases stand operation well, drainage is seldom necessary and the patient should make a rapid recovery.

THE ACUTE FORM WITHOUT PERFORATION.—If these cases can be seen by the surgeon within a few hours after the attack, he is almost certain to find the trouble confined to the appendix, and here his good judgment will be called upon to decide this very important question. I operate upon them if they are in good condition. If the stomach is full of undigested and fermented food it is best to empty it by the use of the tube before the operation. This class of cases, if not handled properly, may rapidly pass into the perforated or gangrenous condition, or assume the chronic recurrent form. No one can tell the condition of the appendix after it has reached this stage, and here again the surgeon will have to decide, and the better his judgment the better it is for the patient. I operate on this class of cases if I have reason to believe the infection has not spread to the surround-

ing tissues, if there is not shock or if there is not abscess formation. If I have reason to believe there is an abscess, I do not operate, but wait for it to become localized, preparing the patient in the meantime for a late operation. When operating upon cases that have a localized abscess, I simply open the pus sac and drain. This may be followed up later with a radical operation, but it is seldom necessary.

DIFFUSE PERITONITIS.—I leave these cases alone as far as operation is concerned. I stop all food by mouth and feed by rectum when necessary. I wash out the stomach as often as it is necessary, generally at intervals of two to four hours day and night, this being highly important. An ice bag is applied to the abdomen and, if pain demands it, administer a hypodermic of morphia. I operate later when the patient will have a show to recover. Drainage sometimes decides the fate of the patient, and my motto is, "It is better to drain too often than not enough." I use a wick drain, made by wrapping gutta-percha tissue around a piece of gauze; this prevents the drain from adhering to the tissue and facilitates drainage. I dress the drainage cases with plain gauze dipped in normal salt solution.

Do not try to do too much for the patient, and do not give salts if he is already vomiting. Nature is trying to help, but will kill her efforts. Irritation of the tissues around the cecum caused from a diseased appendix will produce spasm of the ileo-cecal valve, thus preventing the food and gas in the small intestine from passing into the colon and backing up into the stomach, producing the condition known as reverse peristalsis. Instead of giving salts, wash out the stomach and do it as often as necessary until it is clean. The tube will not kill the patient, but the absorption of decomposed food and other material will.

There will never be a time when every case of appendicitis which has been operated upon will get well. This is true for the reason that we cannot always decide whether to leave drainage in or not. We cannot tell the condition of the appendix until we have seen it. We do not know the nature of the infection. We do not know the degree of toxemia. We do not know how much resistance the patient has left, and we do not always know his

habits. All that can be done is to act upon our best judgment gathered from our experience and the experiences of others whose opportunities have given them a better field for observation.

The incision should be made in the usual place, parallel with Poepart's ligament at a median line half way between the anterior superior spine of the ilem and the umbilicus. If it becomes necessary to examine the ovaries or gall bladder, the incision may be enlarged. Use rubber gloves when operating. Close the wound with plain catgut sutures and a few strands of silk-worm gut. If your technique is perfect there will be few stitch abscesses. I would further suggest that the silk-worm gut sutures do not be removed too early; this will prevent hernia and also allow the patient to move about freely. Do not put on too tight a binder over the dressing over the wound immediately after the operation. The patient is under the anesthetic and not able to tell you when it is too tight. It may be uncomfortable and interfere with respiration. A better way in case there is no drainage, is to tie a fold of plain gauze under the silk-worm sutures, this being the only dressing necessary.

Avoid undue manipulation before and during the operation. Do not allow the patient to receive too much anesthetic; it helps to produce shock, and shock kills many a patient. Have competent assistants, those you do not have to watch. Many cases should receive nutrient enemata soon after operation; they allay thirst and stimulate the vaso-motor system and tide them over a critical moment.

Every surgeon has his own technique in regard to tying off the appendix, and the kind of ligatures used. Any one is good so long as it answers the purpose and keeps down adhesions. The same can be said of preparing the skin at the site of incision. When tincture of iodine is used, care should be used not to apply a moist dressing afterward.

There is as much in knowing when to operate as how to operate, and there is also much in knowing the after treatment. It is impossible to bring out all the details in the treatment of so important a subject as appendicitis. I hope they will be brought out in the discussion.

I shall supplement this paper with these remarks: We try to avoid operating upon a case of pus tubes so long as the patient has fever, and the same rule should apply in the

treatment of appendicitis. I remember one case particularly, a young man who lived in the country four or five miles, who had had several attacks before the one for which I was called to see him. He did not appear to be very sick, was vomiting a little, but sitting up. I hurried him to the hospital and operated within an hour, finding gangrenous appendix. He recovered promptly. This goes to show it is impossible to tell the condition of the appendix until you see it.

DISCUSSION.

DR. R. G. DORR, Batesville: I do not wish to discuss the substance of the papers, because they leave nothing to discuss. The papers show great research and study. They cover everything completely. I am glad to hear Dr. Runyan make one explanation, that he went to the books to get his classifications, because if he had not said that we would think that he went to the books and got three-fourths of his paper.

Now, they go on to tell you about how the germs travel. They don't know; nobody knows. They travel in divers ways we don't know anything about. I would like for someone to tell me why the gonococcus gets in the left knee more often than any other joint, when it is just as close to the right one. Nobody knows. These are theories, and nothing else but theories. That you can get infection by contact is true. That you can get it in the blood is true, but why the germ starts at one point more than any other is something we don't understand.

In regard to the symptomatology, it is all right to talk about "leukocytosis" and all those sort of things. It is nice when you have a pathologist, a microscope and all that sort of thing, but if Dr. Laws, to my mind, would have emphasized that thing of *pain*, of *tenderness*, with *rigid muscles*, with *vomiting* and *fever*, he could diagnose appendicitis in the right iliac region in 95 per cent of the cases, and that is what we "country Jakes" will have to do. That's all right. The city fellow can have all this and do all this, but we "country Jakes" cannot do it. So we have to diagnose it in the good old way right at the bedside.

Now, in regard to the treatment, I think that was well covered, but still it is just like anything else. There is no "medical side" to this case, but there is a "leave alone" side. If you get there in the first twenty-four hours, it is well to operate unless there are great contraindications why you should not operate. But if you get there later, you had better let the patient alone and let nature handle it until she gets it walled off and gets immunity, which latter will be established in the first ten days, and then you can operate during immunity and save your patient.

Now, you are told that if you operate early enough there will be no death rate. They never stop to think that the anesthetic kills people. One in 5,000, one in 10,000 die from general anesthesia. There must be a death rate; it doesn't matter at what stage you operate, it is immaterial. If you administer an anesthetic you are going to have a death rate. We all have it; every one of us. And it is all "buncombe" to make those statements; there is nothing to it at all.

I have known children to die from cat scratches, and you don't know when you scratch your belly but that you get something like a cat scratch. So, it is no light matter, if they handle these cases at the proper time. It is not true because they don't have

a death rate; because they do have it, and they all know it if they stop to think. But they get so enthusiastic with the success they have, and then make these broad statements that will not stand investigation.

I went to New York and watched them operate, and I talked with internes and they all had a death rate. But I came back all puffed up. I took two cases on the second, third and fourth day, and I took them with two deaths as a result. That's what I took fifteen years ago, two deaths. Then that taught me a lesson. I was following the big men, the men that made those broad, open assertions that you must operate on every case you see, regardless of the conditions. Then I quit it. I thought I had better go back to the woods route, and let nature have them for awhile, if I could not get them in the first stage, and since then I haven't had a death. Why? Because I do not operate on them when they are dead, and I don't operate on them at the wrong time. If you can't get there and operate under the proper conditions, leave them alone and leave them in the hands of nature, and give them a chance for their life, and that's what we should do.

DR. H. THIBAUT, Scott: When Burns wrote his "Cotter's Saturday Night," he had the manuscript read by the wife of one of his neighbors. She said, "There is nothing in that. I knew it already." He considered that the greatest compliment he ever received on any of his literary work. It is a good deal that way now when a man writes a paper and reads a paper on appendicitis. But there is one point touched on by Dr. Dorr, and vaguely hinted at in other papers, that I want to take issue with. The day is passed when the country practitioner and the small town practitioner can hide his carelessness, his laziness or his inefficiency behind his locality. It don't make any difference where he is, with the rural free delivery, the railroads and telegraph, his patient ought to receive the same treatment that he would receive in the larger cities of the United States, as far as principle is concerned. If he does not receive it, that man is not fit to practice in town or the country or anywhere else.

DR. DORR: Has one man all that ability?

DR. THIBAUT: He may not have all that ability, but he can send his pathological specimens to the laboratory, and he can get a report in a few hours. If he cannot do it, he ought to get somebody else there with him, or learn to do it himself. Any man who can read English and can get a medical diploma can learn how to make a blood count in his own home. That's an absolutely true statement, and doesn't require any very great skill, and the patient should not risk his life in the hands of any physician, no matter how remotely located, if he is going to neglect those details of diagnosis, whether he lives in the swamps, cypress brakes, in the hills or out on the prairie.

DR. DORR: I would not want the man to die while we were waiting for the leukocyte count.

DR. J. P. RUNYAN, Little Rock. In answer to what Dr. Cooper said in closing the discussion in the symposium on "Gall-Bladder Diseases," a few years ago it was just about as hard for us to get a patient to submit to an interval operation for appendicitis as it is now to submit to an operation for gall-bladder disease when he is not suffering from the colic. I think the doctors and surgeons have done a great deal in educating the laity that the time to have the appendix removed is in the interim.

In regard to what Dr. Dorr said about the death rate from anesthetics, I always feel like this comparison meets that question very well: There is some danger of the train running off the track before

I get home, and killing me, and yet there is not such a danger connected with traveling that I am so afraid of that I prefer to walk rather than take the train and go on home. I accept that danger. The same thing in these anesthetics. There is some danger from an anesthetic, but if I have a patient who needs an operation and there is not some great, big contraindication other than that accidental death that sometimes happens from an anesthetic, I am not going to allow my patient to be deprived of that operation because of the fact that there is some danger from the anesthetic.

Now, I would like to say one thing in regard to one statement made by Dr. Gray in his treatment. I agree with him most heartily in almost every statement that he made, but there is one statement that he made that there is some doubt about in my mind. He said, whenever you open an abscess and drain it, you should always follow that by a secondary operation for the removal of the appendix. Now, I had several patients on whom I had operated for drainage of an abscess, appendiceal in origin, that I haven't advised a secondary operation, because they were relieved of the symptoms, and the fact that the localized abscess took place to such an extent that I could open and drain without any contamination of the peritoneal cavity, I felt pretty sure that nature had virtually cured that patient. As he was symptomatically cured, unless he had further trouble, I did not care to operate on that case any more.

Dr. Stewart McGuire of Richmond, Va., has just recently investigated that subject, and has asked several prominent surgeons throughout the United States to give their opinions as to the best procedure to operate on those cases immediately or as soon thereafter as the patient gets into condition to have an operation, or to wait until they have further symptoms. Nearly every one of the surgeons who reported to him said that they are now allowing the patients to go on until they have further symptoms before advising any further operative procedure.

DR. J. V. LAWS, Hot Springs: I simply wish to report two personal cases to bear out one point I made in the paper in regard to the gastric symptoms which were caused by appendicitis. The first case I operated upon just about a year ago was the wife of a physician who had been going around to her husband's professional friends, two or three stomach specialists included, and being doctored for disease of the stomach. Finally she had some more pains. That is, the pain was more localized on the right side—I mean over McBurney's point—and she came under my care, and I advised the removal of the appendix. I found a chronic appendicitis and the appendix was removed. It was a simple operation, but it cured her gastric symptoms entirely. I think, if I mistake not, she weighs at least forty pounds more than she did before her appendix was removed.

The next case was one that came under my care, and I kept her under observation for at least three months. She was having some annoying symptoms and attacks, and I saw her in two or three of her so-called attacks, but at no time could I get rigidity of the muscles and I hesitated to operate upon her. But finally I convinced myself the best thing to do would be to make an exploratory operation, which I did, and to my surprise found the appendix thickened and containing a foreign body, which apparently was a small portion of a chicken bone. That, of course, was removed with the appendix. She was relieved entirely of her stomach symptoms, and has been absolutely well and has gained flesh ever since.

DR. OSCAR GRAY, Little Rock: If I said we should always operate, I should have said it was optional with the patient, provided the condition does not

improve. The same thing applies to pus tubes also. Here is the trouble: It is a hard matter to get a man to be operated upon when he is eating three meals a day and can get around and attend to business. As I say, that condition may at a later day produce some pathological condition. Let them alone unless they want to be operated upon.

HEADACHES OF OCULAR AND NASAL ORIGIN.*

By John G. Watkins, M. D.,
Little Rock.

The subject of headache is one that concerns, either directly or indirectly, every member of this society, it being probably the most frequent symptom of which our patients complain. There are very few of greater importance and none that will more readily tax the physician's diagnostic and remedial skill.

The causes of this complaint are manifold, but it is not the province of this paper to discuss those not enumerated in its title, other than to recite what one author of considerable repute says, namely: "That headaches are *not* due to diseases of the female organs of generation." Headaches of ocular and nasal origin are those acute discomforts in and about the head that result directly or indirectly from some organic or functional disease affecting the eye or nose. The ocular element in headaches is very large, being in all probability not less than forty per cent. In trying to ascertain the cause of headache, it is well to remember that its character and site is all important; for be it remembered that a unilateral, supra-orbital headache or a hemi-crania of any kind whatsoever is not commonly due to eye strain, but rather to some pathological condition in the nose, or some one of its accessory sinuses; whereas, in bilateral frontal headaches, probably the percentage due to eye strain is seventy-five per cent. Symptoms of eye strain associated with headache are: Increased lachrymation, inability to continue near work, dizziness, nausea and vomiting, redness of the eyes, with itching and burning of the eyelids; somnolence in some individuals, insomnia in others.

Headaches associated clinically with chronic nasal catarrh may be divided into three classes: Reflex, neurotic and inflammatory. These reflex headaches of nasal origin are confined almost exclusively to the forehead, tem-

ple and vertex, and are due to pressure exerted upon the nerves by swelling of the intra-nasal tissues. In this connection it may not be amiss to call your attention to the "eye spot of the nose," irritation of which produces such ocular reflex symptoms as supra-orbital neuralgia, lachrymation, congestion of the conjunctiva, with burning and smarting of the lids, blepharitis, etc. This irritation may be brought about by engorgement of the turbinal tissues, especially the middle, or the same symptoms may be produced by a septal spur that presses into one or the other turbinate. From rarefaction of air within the frontal sinuses and anterior ethmoidal cells, we have unilateral headaches and asthenopic symptoms. Headaches from disease of the sphenoidal sinus are usually referred to the occipital and temporal regions, or to the region at the "base of the brain" and back of the eyes.

Headaches of nasal disease very closely resemble those due to refractive and muscular anomalies of the eyes. About ten per cent of the cases suffering from asthenopic symptoms are in reality due to some intra-nasal disease, oftentimes being due to some seemingly unimportant process, such as a catarrhal inflammation or a slight tumefaction that allows the spread-out nerve endings to be more easily irritated than when covered by hypertrophied connective tissue or nerveless tumors, such as polypi.

The treatment of headache of ocular or nasal origin consists in first ascertaining the underlying causative factor. If it be due to an error of refraction or muscular imbalance, a pair of properly fitting glasses worn constantly will give complete relief. If it be due to some pathological condition in the nose, then, of course, treatment would consist in the correction of the nasal abnormality. I would say, therefore, that an examination of the eyes for the cause of headaches is incomplete without a careful and thorough examination into the condition of the nose and its accessory sinuses.

I do not claim originality for the views set forth in this article, neither have I mentioned the names of those who have contributed largely to this subject, for to have done so, with equal justice, would have produced a bibliography almost as long as the article itself. I just simply wish to add that my experience corresponds with theirs.

*Read before the Pulaski County Medical Society, November 27, 1911.

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All communications to this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the State. Notice of deaths, removals from the State, changes of location, etc., are requested.

ADVERTISING RATES.

A schedule of rates will be furnished upon request.

CHANGE OF ADDRESS.

Change of address will be made if the old as well as the new address be given.

ANONYMOUS COMMUNICATIONS.

No anonymous communications will appear in the columns of this Journal, no matter how meritorious they may be.

NOTICE.

All changes of address should be sent to Dr. C. P. Meriwether, secretary of the State Society, as he furnishes the mailing list each month of our members. All communications for publication should be sent to the editor not later than the 5th of each month.

Editorials.

LITTLE ROCK'S CAMPAIGN FOR BETTER HEALTH.

It is encouraging to know that Little Rock has at last awakened from her long slumber and taken cognizance of the dangers with which the health of her people have long been beset. The typhoid epidemic of last summer, though costing many lives and entailing an economic loss of thousands of dollars, will have been cheap, if in the future pure water and milk can be guaranteed the public.

If all the suggestions made by Dr. Frost, of the United States Public Health and Marine Hospital Service, could be translated into ordinances, and provision made for their efficient enforcement, Little Rock would become one of the healthiest cities in the United States. Public sentiment has been wonderfully improved as a result of the plans of the city to inspect foodstuffs, and this little gain should be seized upon to enact more comprehensive sanitary measures.

One of the most pressing needs as mentioned by Dr. Frost is a municipal laboratory. An ordinance was drawn by a committee of the Pulaski County Medical Society looking to the establishment of a laboratory for the free examination for diphtheria, tuberculosis, milk, etc., but so far as we know the original ordinance "died a bornin'." It is indeed farcical to think of a city of 60,000 population attempting to do scientific and effective public health work without a well-equipped laboratory. It is the very basis of such work, and the municipality should lose no time in placing the city in its proper rank.

We understand that a movement is now well under way looking to the removal of the livery stables from the shopping district. Of course, the ordinance will be fought to the last extremity by the owners of the stables, but if the people would only support the city health officers, these fly-hatcheries could be condemned as nuisances and they would have to move on. An ordinance would not be necessary.

With the early inauguration of a municipal garbage system, the inspection of meat and milk, a determined safe water supply, and with a generous use of soap with the latter, Little Rock ought to step decidedly forward in public health matters. Dr. O. K. Judd, the efficient city health officer, only lacks ordinances and money to make Little Rock an ideal sanitary city.

MEDICAL BANDITS IN ARKANSAS.

Information received from reliable sources would indicate that the state is literally swarming with itinerant patent medicine vendors, and that, unhampered in their nefarious trade, are fleecing the lambs right and left. A recent decision of the Supreme Court let down the bars which were thought to be quack-proof, hence this recent rush to our rich and succulent fields by a horde of medical bandits.

In the light of the education which the people have received for the last few years through current journals, medical and non-sectarian, one would hardly have believed that the long-haired faker with his kinky-headed accomplice ravishing an old home-made banjo could draw such large crowds as the writer chanced to observe recently while visiting a city in the eastern portion of the state. The street was full of people—men, women and children—all apparently absorbed in the wonderful claims made for the medicine.

Did they part with their money? Ask the

party of the third part, conspirator and abettor number three, the druggist who delivered the goods on orders.

It is high time that the legislature pass a law so tight and hole-proof that, though one of these medical highwayman be as small as a microbe, he could not get through. The situation is a terrible one, and until the legislature meets, municipalities should at once take prompt action.

The State Board of Health will furnish a copy of an ordinance which will effectively put a stop to the nefarious business. Write for a copy.

THE PASSING OF DECKER.

Dr. J. W. Decker, the erstwhile dean of the Gate City Medical College and School of Pharmacy, Texarkana, was recently convicted in Texas for the fraudulent use of the mails, and as a penalty for his carelessness is now serving a fifteen months' imprisonment in the Leavenworth prison.

In 1903-4 the Gate City Diploma Mill was in full bloom, and graduates were coined in short order. The Arkansas Medical Society routed the dean and his professors with the effective weapon of publicity, before he filled his pockets with the hard earnings of Arkansas boys, and he left the state with sincere regret. The dean, as he was familiarly called by his admirers, is now reaping the harvest of his sowing.

DR. McCORMACK TO VISIT ARKANSAS.

At this writing it is about definitely settled that we will have a visit from Dr. J. W. McCormack of Kentucky, the official organizer of the American Medical Association, some time in January. Dr. C. P. Meriwether, secretary, is now in communication with component secretaries with the view of arranging the itinery, and just as soon as the route is determined, public notice will be given. There is no more forceful speaker in or out of the profession than Dr. McCormack, and the officers and members of the Arkansas Medical Society will do their utmost to get large audiences at his speaking points.

NOTICE.

Dr. Morgan Smith, secretary of the State Board of Health, is gathering statistics on pellagra, and would appreciate reports of cases by the members of the Arkansas Medical Society. In reporting cases please give: (1) Name, (2) age, (3) color, (4) sex, (5) address, (6) civil condition, (7) duration of disease, (8) where contracted, (9) history, (10) treatment, (11) and results; (12) give theory of disease.

Editorial Clippings.

THE GENTILE ART OF HECKLING PUBLIC SERVANTS.

Bull baiting and worrying the badger used to be popular amusements in Merrie England. Then came the Puritan revolution, and the bulls and badgers enjoyed a respite. The steeple-hatted reformers, however, were not to be denied their bit of sport. To be sure, they didn't call it sport, for anything that smacked of gaiety or frolicsomeness was alien to their spirit and their ideas of a serious and religious life.

Nevertheless, they harried the Malignants and the Quakers in England with zest, and even though they called it by another name, enjoyed the game with great relish.

When we took over Cuba temporarily for the good of the Cubans, and the Philippines from similar altruistic motives, we sternly repressed their playful ways with bulls and game chickens. Of the humanity of our methods of transporting live stock across the plains and carrying chickens to market, the less said the better, if we would refrain from blushing. Still, we are outwardly and properly virtuous in the matter of bull rings and cock pits, and only suffer live stock to be tortured when it hurts our pocket nerve to be humane. Even in the matter of prize fights we exercise our inherited Puritan virtues and only allow them on the sly, when there is a great deal of money to be made by somebody and we gaze at the contest through our half-opened fingers with pleasantly shocked amusement.

We are hypocritically and intermittently humane to our live stock, but frankly and openly brutal to our fellow-men who are doing their best to serve us. We are like our Puritan forefathers and protect fur, fin and feather, but hunt our brothers to the death. Three notable examples of this detestable habit have occurred lately, of which as a people we ought to be heartily and sincerely ashamed. When the pack in full cry succeeded in bringing down the chief forester, they slew a stag of ten. He was dismissed, subjected to capital punishment; nailed to the barn door like any corn-stealing corbie crow and the unco guid and precisians rejoiced at the downfall of a public servant whose chief crime was his earnestness and zeal in preserving the public domains for public use, but he was overzealous and indiscreet, and for this sin his skin adorns the barn door. He was only a trifling scientist and not much of a politician, anyhow. A few months later came the decision which put heart into the vendors of quack medicine and the receivers of blood

money, and now the pack are in full cry again after the chief chemist. Horrible to relate, he has paid a distinguished scientist at a per diem rate in excess of nine dollars a day for doing important and difficult work and for this merits "condign punishment." No matter if there was precedent for the procedure, nail his skin to the barn door quickly to keep company with the corbie crow. It matters not that he has done more than any man of his generation to protect the common people from poisonous compounds and rotten food products. Show him no mercy. Quick with the knife, the nails and the hammer.

Shall our own Empire State lag in the rear when there is so much good hunting abroad? Perish the thought, and so the pack are in full cry at the heels of the chief sanitary officer of the port of New York, whose sins are many and must be investigated. His chief offense, to be sure, consists in the fact that he draws a salary and earns it. Somebody else wants it; therefore, nail his skin to the barn door.

The medical profession of the state are a unit in testifying to his extraordinary efficiency. There really doesn't seem to be any way to get rid of him decently. "Let's get up an investigation; we can't help finding something," so barks the pack. In politics it is good practice to make a mountain of a mole hill. A gentleman is straightway appointed as commissioner, who forthwith proceeds to demonstrate his ignorance of the first principles of sanitation and utter unfitness for his task by raising a shocked outcry at certain details of quarantine. To be sure, prominent members of the medical profession agreed with the sanitary officer, but he thought he had a hot scent and promptly lifted up his voice to bay his game. We had the Asiatic plague on our threshold. The situation was difficult, even critical. Italy was pouring her surplus population into this country from infected ports. We had every reason to uphold the hands of our sanitary officer, who had for years demonstrated his efficiency to the men who know, the doctors of the State of New York. However, a few politicians know better, or rather don't care anything about the merits of the case nor the people's health. They want the job and the cash. So, a faithful and competent public servant is heckled and harried at a time when he is straining every nerve in the discharge of a difficult and dangerous duty. It is of the utmost importance that his hands should be upheld at such a time. It is not an issue of local import; it is of national importance. Let cholera once gain a foothold in the city of New York and it will be almost

impossible to prevent its spreading to other parts of this country. Let that once happen and no one can predict the loss of life, loss of money, loss of public confidence.

All these considerations seem of little moment to the politicians. Somebody needs the job, "Let us put in a new and untried man."

And there is but one hand between the knife, the skin and the barn door. It is to laugh. It is to weep. It is to be ashamed.--*New York State Journal of Medicine*, September, 1911.

VITAL STATISTICS.

The widespread movement for accuracy and completeness in the compilation of vital statistics should have the hearty support of every physician in private practice and not be left solely to the efforts of governmental officials and the heads of institutions. A failure to record accurately the main facts of population movement and the etiology of diseases is one of the chief causes of impeding progress in sanitation and preventive medicine.

The first thought in connection with vital statistics is that of an array of figures dealing solely with social conditions, and having little bearing upon the practice of medicine; but if one takes the trouble to review the history of the greatest discoveries in preventive medicine it will be seen that the chief advances along these lines have taken place since the tables of statisticians were used for the purposes of investigation as well as for governmental administration. The truth of this statement can perhaps be best illustrated by a reference to some of the greatest discoveries in medicine which owe their origin to a study of phenomena common to a large number of cases, thereby directing attention to the possibility of two seemingly essentially different conditions bearing to each other the relation of cause and effect.

The discovery of the cause of the transmission of yellow fever would never have been possible had Reed and his associates been unacquainted with the fact that this disease was governed by the same natural laws as the mosquito. The etiology of beriberi promises to be soon revealed by the observation of the seemingly unrelated phenomenon of its prevalence in those districts where polished rice is consumed instead of the unpolished. The statistics of insane hospitals were absolutely essential to establishing the casual relation between syphilis and paresis. The evidence leading to the discovery of the manner of transmission of bubonic plague was entirely circumstantial and depended upon the accumulated statistical testimony that where there were no rats there was no plague. In like

manner the instances might be indefinitely multiplied to show the great value of the careful observation and recording of seemingly unrelated phenomena.

That the profession, generally speaking, is lax in the performance of this duty, is shown by the fact that, in so important matters as a knowledge of infant mortality and the protection of infant life, the most essential factor is neglected by the failure of the general practitioner accurately to register births. As the ratio of infant mortality depends upon a comparison of the deaths of infants under one year of age with the total births, it follows that, without the exact registration of the latter, we can have no accurate way of arriving at the truth. There is still a great deal to learn about tuberculosis; the problems of its contagiousness, how far heredity plays a part in its etiology, and the best method of its prevention and cure are by no means settled questions. The solution of these problems undoubtedly lies in the collection of accurate statistical data, compiled upon a large and uniform scale; yet, in the consideration of this important question, there is no means of knowing within a wide margin of error how many persons in the United States die from this cause during any one year. Dr. Wilbur, chief of the Division of Vital Statistics of the Census Bureau, states that the estimates have varied 138,000 to 200,000. He believes that the truth lies somewhere between the two figures and laments the fact that, in entering upon such an important sanitary campaign as the prevention of tuberculosis, we are obliged to depend upon mere guesswork.

The crying need of better statistics was clearly shown in the census returns for 1909, when acute anterior poliomyelitis was returned from the registration area of the United States under twenty-four different headings.

The world-wide recognition of this need was responsible for the calling of an International Commission for the second decennial revision of the causes of death by the government of France, at Paris, in 1910. The United States was represented at that meeting, and as a result the Census Bureau has recently compiled a vest pocket edition of the International List of the Causes of Death for free distribution to every physician in the United States. A careful study of the nomenclature of the disease in this leaflet, and a conscientious adherence to the directions therein contained, should greatly contribute to the advance of sanitation and preventive medicine.—*New York Medical Journal*, September 30, 1911.

FEEDING IN FEVERS.

During the last fourteen years we have repeatedly called attention in the editorial columns of the *Gazette* to the fact that the great majority of patients who suffer from prolonged fevers are not adequately nourished. The basis for the small amount of nourishment commonly given, to patients suffering from typhoid fever, for example, doubtless depends upon the teaching of many years ago, when it was thought wise to starve febrile patients. Light feeding also rests upon the idea, which is very prevalent, that in these prolonged fevers there is a deficient secretion of digestive juices, and therefore the patient is unable to deal properly with foodstuffs when they are given to him. Those who have resorted to the administration of fairly liberal amounts of food to patients suffering from typhoid fever have almost universally been in accord to the effect that the evil symptoms of the disease during its progress are certainly not increased, but, if anything, modified for the better, and furthermore have found that the patient passes through the stage of convalescence more rapidly than a patient who has been upon a lean diet. He often fails to have the profound nervous exhaustion and staggering gait which are so commonly met with in patients who have nothing but a milk and broth diet. Indeed, the individual who used to be met with so frequently in a state of profound emaciation after a long attack of typhoid is now comparatively rarely seen, if his feeding has been adequate.

It goes without saying that solid foods are not as well dealt with by the digestive apparatus of the sick man as are liquids, but there are some who go so far as to claim that the average typhoid patient is perfectly able to deal with tender meats. We do not know that we are willing to go as far as this, but we would prefer the use of such a diet to the rigid milk diet, since it is quite impossible for any patient to take a sufficient amount of milk in twenty-four hours to maintain his nutrition, the more so as his nutrition is sapped continually by the fever.

In regard to the important and interesting question as to the influence of fever upon the secretion of digestive juices, we have been interested in an article published in the July issue of the *American Journal of the Medical Sciences* by Nichols. Nichols has made a large number of investigations concerning patients suffering from various forms of acute febrile maladies, such as typhoid fever, re-

lapsing fever, tuberculosis, etc., and he concludes that so far as the data are available the average reduction of digestion during fever does not amount to more than five or ten per cent, and he further believes that this diminution in digestive activity is a negligible factor. Furthermore, it would seem to be pretty well proved that the digestion of animal and mixed food in fever is quite as good as that of vegetable food in health.

If it be true, therefore, that these patients have no material impairment of digestion, and if it be true that milk is quite incompetent to nourish them when given continually, the deduction must certainly be that vegetable gruels, aided more or less in their digestive action by pancreatin and taka-diastase, are indicated in such cases.—*Therapeutic Gazette*, November, 1911.

THE MARRIAGE OF WHITES AND BLACKS.

Every student of sociological matters will be deeply interested in the press reports of the alliance between a negro girl and a white man, the denouement of which occurred quite recently. In a quiet suburb of St. Louis lived a family, among whose children were several good-looking girls. It is true they were dark-skinned, but as they declared their family to be of Spanish extraction, no suspicion whatever that they were of Ethiopian descent was aroused until a child of distinctly negro type was born to one of them, the wife of a white man. The husband had courted the girl for many months and saw no indication that she was the offspring of mixed percentage. He married her. Finally the baby came. There could be no doubt, from the appearance of this child, that it was of negro ancestry. With the arrival of the child the truth became known. The young wife was a negress. The features of interest in this case are the wide chasm between the races and that reversion to type in one of the immutable laws of Nature. The races are farther apart than ever. The black race will never be absorbed by the white race. The former race may become attenuated and gradually die out as a result of disease, and the sterility of its hybrid stock, but there can be no encouragement offered to those deluded fools who pretend to see in miscegenation the solution of the race problem. In this particular instance, whilst the mother is so nearly white that for many years she passed as such, and the father is a pure Caucasian, yet it is said that their child is just an ordinary little pickaninny. In formulating her law of reversion to type, Nature knew well what she was about. The feeling of horror which comes to every white person read-

ing of this sad *mesalliance* is an unconscious manifestation of race superiority, which is deeply implanted in the white bosom. Nature has ordained that the two races shall not meet on terms of equal footing, and white advocates of social equality between whites and blacks would better modify their code. It is not prejudice that keeps the negro below us—it is simply one of Nature's laws and it will exist in force throughout all time.—*American Journal of Dermatology*.

THE NEW YORK ACADEMY OF MEDICINE VS. FEE SPLITTING.

The following notice has been sent to all members of the New York Academy of Medicine:

At a stated meeting of the New York Academy of Medicine, held October 5, 1911, the following resolution adopted by the council on May 24, 1911, was read, and it was unanimously voted that this resolution be endorsed by the academy.

Resolved, That the secret division of a fee, or fees, with any person, or persons, who may be instrumental in influencing a patient, or patients, to apply for operative care or professional advice, is unworthy of any member of the medical profession.

Resolved, That if such a division of fee is made by a member of the New York Academy of Medicine it should be counted as of sufficient ground for the expulsion of the member.

Resolved, That the council considers it its duty to investigate charges against members made on the basis of such division of fee, and on receipt of proof of offense the council may either permit the resignation of the person or expel him from the academy.

This is a move in the right direction and one which is commended to the various county societies. The first step toward the correction of an evil is the public recognition that it is evil and deserving of punishment. Now that so influential a body as the New York Academy of Medicine has put the stamp of its disapproval on the practice and signified its intention of expelling such of its members as are found guilty of dividing fees, whether as giver or taker, it is to be hoped that the county societies will in like manner signify their disapproval *and act*. We may well learn a lesson from the lawyers who, through their local bar association, discipline members of the bar for unethical conduct. In the medical profession it is a very rare occurrence for discipline to be administered when it is clearly demanded. Everybody takes to the woods when the matter comes to the question and dives behind the nearest convenient bush. A twenty-five-dollar consultation looms larger than the honor of the profession. So the lay press have taken to lecturing us on our misdeed and the Board of Regents threatens to take a hand and do our duty for us. It is a condition of things which is utterly discreditable to a profession that in former times de-

served the respect of the public and possessed it. Let it not be said that we are utterly callous and unashamed or too cowardly to mend the evils we admit.—*New York State Journal of Medicine*, November, 1911.

THE VENDER OF INTELLECTUAL NOSTRUMS.

It was a notable warning which President Butler recently gave the graduating class of Columbus University, against the nostrum venders, political, literary and religious—and he might well have added, the medical—all of whom now so dreadfully infest our American civilization. These, he well observed, are the men of “new ideas” (such ideas as Plato discarded many centuries ago as perverse); the men (and women) who preach “new thought” without ever having learned to think; the multitudinous advocates of change for the sake of change; of reforms springing from no need and growing out of no experience; the shallow, unqualified, half-baked horde who are letting loose on the land a torrent of talk, to the degree that “the educated man or woman of today has literally to struggle against being swept into the current of irrationalism.”

Knowledge has come on our people in veritably cyclonic measure, while wisdom has emulated the snail in its progress. “The marvelous last half century of science,” continued President Butler, “has made absolutely no impression on the thinking habit. Science has destroyed many prepossessions and not a few beliefs; but it has not yet taught mankind to think. Our age is far less reflective than was the eighteenth or the first half of the nineteenth century; our people are now ever busy hunting for something new.”—*J. A. M. A.*, September 9, 1911.

DEPARTMENT OF MEDICAL JURISPRUDENCE.

By Hon. R. L. Floyd, Little Rock,
Member of the Pulaski County Bar.

INTRODUCTORY.

The purpose of this series of articles is to give the physician and surgeon reliable information free from technicalities as to his legal status, rights and liabilities growing out of the practice of his profession.

Conditions frequently arise in which the physician would like to be sure of his legal position, whether or not there is any likelihood of litigation growing out of them. When

he is fully advised of his legal status he is in a position to determine his further course intelligently.

In very recent times only, have states undertaken to regulate the practice of medicine and surgery. Most of them now restrict the right to practice to those who possess certain qualifications and comply with certain requirements, to whom they issue authority to follow the practice. Besides this protection, states extend some other privileges to the profession, such as exemption from jury duty, road duty, and some others, varying with different states and countries.

On the other hand, the state is constantly increasing its demands upon the profession. Compared with others, this state requires very little. The protection and exemptions given to physicians and the demands made upon them by the state are not intended primarily to benefit or burden them, but grow out of the necessity of protecting the public at large. Much of medical legislation cannot be upheld on any other ground. Medical practice acts almost invariably are such as would be held to be unconstitutional if applied to other professions or business, but are sustained by the courts as coming within the police power of the state.

The great increase in general education as well as the higher development in all lines of human activity has also its counterpart in the medical profession. No less has the law governing the members of the profession in their relations to the state and their patients advanced. There has grown up a greater tendency to exact from the physician a legal accounting for his professional acts, which, until very recent years, was unheard of. It is entirely possible that a physician acting in perfect good faith and perhaps exercising good judgment will be liable for heavy damages, if not criminally, for an unfortunate termination of his efforts.

There is so much necessarily left to the discretion of the physician that no hard and fast rules can ever be devised to apply to particular cases. Yet the leading principles are well settled and a working knowledge of them would be of great value to the medical profession. This series will attempt to impart that information.

In order to give an idea of the scope of the articles to follow, some of the subjects that will be discussed are indicated below:

The Right of Practice.
 Revocation of License.
 Practicing without Authority.
 Contract with Patient.
 Liability for Negligence.
 Liability for Wrong Diagnosis or Treatment.
 Liability for Departure from Established Practice.
 Right to Leave Patient in Care of Another Physician.
 Authority to Perform Operation.
 Rights and Liabilities Growing Out of Emergencies.
 Measure of Damages.
 Compensation.
 As Expert Witness.
 Privileged Communications.
 Medical Societies.

This is not meant to indicate the order in which they will be handed, nor that each is to have separate treatment, nor is the list intended to be exhaustive. It is probable that each article will refer to one or more cases illustrating the principles showing how the law has been applied in specific instances.

Meanwhile the writer will be glad to answer any questions under this general subject that may be referred to him, provided, of course, they do not involve a prohibitive amount of research.

Communications.

INDIANA DOCTOR DESIRES TO MOVE TO MORE PLEASANT FIELDS.

OFFICE OF

The Arkansas State Board of Health.

Little Rock, December 10.

To the Editor:

The enclosed letter from an Indiana physician who desires to move to Arkansas and practice his profession, I take it, will be read with interest by those who have been identified with the movement to safeguard the interests of the people and to draw tighter the net which entraps the incompetent itinerants who look upon this state as a shining spot and altogether lovely. Thanks to the medical practice act of 1903-07 and the activities of the State Board of Medical Examiners of the Arkansas Medical Society, only the desirables are welcomed to Arkansas.

Yours truly,
 MORGAN SMITH.
 Secretary State Board of Health.

THE LETTER.

December 4, 1911.

To the State Secretary of the board of health and Registration. Dear sirs as i have been experimenting reading professional books and doing my own doctoring and furnishing medicine for others been experimenting and reading doing my own doctoring princply for the last 28 or 30 years i am well neig 55 years old a poor man and not able body man if i come to Arkansas to make my future home will you give me the right to go a head and doctor the medical board of Indiana would not let me pass an examination but go ahead as I had been i never use any thing but harmless medicines i have always been successful.

Very truly yours

Miscellaneous.

EXPLOSIVE COMBINATIONS.

- (1) A few tablets of potassium chlorate kept in a pocket with a box of matches cause explosion.
- (2) A mixture of t. ferri perchlorid., glycerin and potassium chlorate explodes when warm.
- (3) Chloral hydrate and sp. ammon. aromat. in a mixture liberate so much chloroform as to explode.
- (4) Bismuth subnitrate and sodium bicarbonate given in a mixture, liberate CO₂ to cause an explosion.
- (5) Nitric acid should not be mixed with glycerin.

Bad Cold Lie.—There is the "Bad Cold" lie, "I would just as leave have the clap as a bad cold." This is one of the most dangerous lies as to sex matters in existence. It is a lie uttered by thousands of men who, whether they really believe it when they give it expression, find out sooner or later that they have been the victims of a vast delusion. This lie should be promptly garroted and then embalmed in prussic acid, to make sure that there shall never be a possibility of its popular resurrection. The killing of this lie would go far in saving many wives from the operating table, would save many men and women from sterility and many babes from blindness. The killing of the lie would also have the result of teaching a young man that he has contracted a dangerous disease in gonorrhea, and that he must lose no time in placing himself in the hands of an honest and competent physician, for the successful treatment of gonorrhea is often dependent on its immediate treatment. When the disease finds its way into the deeper tissues of the body it is then sometimes a grave question as to its eradication. Young men will learn to keep away from uncertain and perhaps dangerous drug store remedies, and will also learn to keep out of the clutches of quack advertising doctors, whose first thought is money, the welfare of the patient being a minor consideration. Again, quacks are often blackmailers, who, after learning the secret of their patient, bleed him for excessive fees under threat of exposure by bringing suit. A young man will also learn that he must not marry with any of the germs of this disease in his body. A latent gonorrhea or gleet is scarcely less capable of infecting than is active gonorrhea. A young man who contracts the marriage relation in such a condition commits a physical and moral crime. It is also a statutory offense in the State of Indiana, which state has passed a law demanding that the applicant for a marriage license shall make statement that he is free from the social diseases. Would that all states might pass similar laws, and that an enlightened public sentiment should demand their enforcement to the letter.—Health Circular, Indiana State Board of Health.

Treatment of Joint Infections by Aspiration and Injection of Two-Per-Cent Formalin in Glycerin.—Poley (*Northwest Medicine*, March, 1911) notes that in Dr. John B. Murphy's service he had sixteen joint cases under his treatment. The formalin was regarded as stimulating and healing. His greatest percentage of cures is to be noted in acute and subacute joint inflammations. Tuberculosis synovitis is said to give brilliant results. Extension is put on after treatment. The solution is prepared by adding to an ounce of glycerin ten drops of formalin. This is thoroughly shaken. It should not be used unless made up twenty-four hours previously. Extension apparatus is applied before the injection is made. The fluid in the joint is first aspirated, and into the knee joint about half an ounce of the solution is slowly injected. Equal distribution of the solution to every part of the joint cavity should be secured by flexion, extension and massage. A cotton collodion dressing is applied, the weight swung into place, and the patient given one-fourth grain of morphin immediately. A second morphin injection may be necessary in four or six hours, but after this the patient is very comfortable.

On the fifth day the acute swelling begins to recede and pain becomes less on passive motion. The interval between injections is usually ten to fourteen days. Two injections are often sufficient, but as many as five are warrantable before giving up a case. After the last injection a tuberculous case is allowed to walk on crutches four to six months, wearing a long, three-fifths, circular cast and receiving tuberculin injections of five to ten milligrammes once a week. Of the tuberculous knee cases, seven are reported as having been cured by from two to five injections. Non-traumatic synovitis of the knee was cured by two injections; one cryptogenetic infection of the knees and the right elbow, three injections cured. It was noted that one case of synovitis of the shoulder and one case of beginning arthritis deformans were unimproved.—*Therapeutic Gazette*.

The Relation of Tetanus to Injections of Quinin.

—The occurrence of tetanus after an operation wound is always a distressing incident to the practitioner, and when it supervenes after such a trivial injury as the insertion of a needle for hypodermic injection it amounts to a calamity. It is unfortunately a fact that in many cases tetanus has supervened on the administration of quinin in this manner, even when all precautions as to sterilization have been carefully carried out. The late Professor Maclean was much impressed by this danger. "There is something revolting," he said, "in a death brought about directly or indirectly by a remedy intended to cure." Naturally, it is chiefly in tropical climates that this accident is likely to occur, but there is not any very extensive record of cases, possibly because the medical men concerned have not been anxious to say much about them. The dangers of subcutaneous injection of this drug, and the reasons thereof, have been recently considered in a memoir on "Quinin and Its Salts," by Captain A. C. MacGillchrist, I. M. S. In a further memoir by the director of the Indian Central Research Institute at Kassuli we have a full discussion of the "Relation of Tetanus to Quinin Injection." On this memoir a correspondent in India sent the *Lancet* a brief note, but it merits fuller consideration.

In an account of his researches, Sir David Sample, after a consideration of the nature of tetanus infection, describes the effects of large doses of quinin on rabbits and guinea-pigs, the principal objects of the experiments being to determine (1) the dose

which would produce well-marked effects without proving fatal; (2) the local effects when given hypodermically; (3) whether the local and general effects, when the drug is so given, have any influence in favoring tetanus infection; (4) whether animals can withstand larger doses by the stomach than hypodermically; and (5) to gain some information as to the effects of quinin given intravenously. The salt of quinin used was the bihydrochloride. When given hypodermically, 1 grain per 150 grammes body weight for a guinea-pig and 6 grains per 1000 grammes for a rabbit are lethal doses. By the stomach, 1½ and 15 grains have the same relative effects on these two animals respectively, but in some cases less would prove fatal. These fatal results are not due to the acidity of the solutions used.

An important point established was that, when injected either hypodermically or into the muscles, quinin has a well-marked destructive action on the tissues at the site of the injection; foci of dead tissues are produced, serving as suitable anaerobic media for the growth of tetanus spores should thus be introduced; and, besides this, conditions are brought about favorable for infection by "washed tetanus spores," supposing these are injected into other situations. What are called "washed tetanus spores" are spores which have been freed from every trace of toxin by filtration and washing the precipitate with normal saline solution. They do not cause tetanus when injected into guinea-pigs or other susceptible animals, because the phagocytes at the seat of injection are capable of picking up and digesting such pure spores; provided that there is nothing introduced to destroy tissue, produce a "negative chemotaxis," or divert the phagocytes from performing their bactericidal functions. Quinin injection, however, has such an effect. When quinin is given hypodermically to tetanus-infected animals, tetanus germs are transferred from the original site of infection to the site of quinin injection. This is a very remarkable phenomenon; it was noticed in five out of six experiments, confirming Vincent's observations in 1904. It is supposed that the phagocytes are weakened, that some reenter the circulation carrying tetanus spores, and before they are able to deal with them get stranded at the site of quinin injection; here the spores find dead tissue under anaerobic conditions suitable for their germination.

"Washed tetanus spores," injected hypodermically, do not cause tetanus in guinea-pigs and monkeys; but a large percentage of animals do contract tetanus if hypodermic injections are given at or about the same time. Washed tetanus spores, when injected hypodermically, may remain latent for months. It was found that cold (exposure to a temperature of 38 degrees F. in a cold chamber) had an influence in producing tetanus in guinea-pigs when washed spores were inoculated, this influence being increased by the hypodermic injection of quinin. Tetanus infection was present in the intestine of four out of ten healthy human subjects examined, and in three of these cases the bacilli were virulent to guinea-pigs; pseudotetanus bacilli were present in all ten cases. Tetanus spores were found to survive and retain their virulence on a rusty pen-nib for a prolonged period; the nib was in a test tube capped with India rubber, kept in a cupboard at room temperature. Lastly, tetanus antitoxin has been found to be an efficient prophylactic against tetanus, when it is necessary to give quinin hypodermically.

This most valuable research throws light on much that has hitherto been obscure; it confirms the opinion that there is risk in the employment of hypodermic quinin injections, but also shows how the dangers may be avoided.—*Lancet*, June 10, 1911.

Innocent Gall-Stones a Myth.—W. J. Mayo (*Journal American Medical Association*, April 8, 1911) says that the old idea of gall-stones without symptoms must now be acknowledged to be incorrect. We have become better informed by operative experience with the disease. He questions the high percentage of gall-stones in the general population as estimated by some good authorities and thinks that it is more probable that not over 0.5 per cent would be a fair estimate of the frequency of gall-stones in individuals of all ages, although evidence at hand shows that from 5 to 8 per cent of women and from 2 to 4 per cent of men have gall-stones after the age of 50. The symptoms may not be recognized as regards their source, though appreciable to the individual and to the observer. He has been impressed with this fact on finding undiagnosed gall-stones in operating on women for pelvic trouble. After the recovery of the patient he has nearly always been able to elicit a satisfactory history. The hypothesis of Lartigau as to the bacterial causation of gall-stones is probably correct, though it is difficult to demonstrate it experimentally. Their place of formation is in the gall-bladder, and Mayo describes and discusses the anatomy and functions of this viscus. It cannot be considered merely a storage house for bile, he says, and it is most reasonable to suppose that its function is to relieve temporarily the pressure on the common and hepatic ducts and also, if necessary, the ducts of the pancreas. Another function is the production of mucus, which, mixed with the bile, protects in a measure the pancreas from injury if the mixture is forced into the pancreatic duct. That the gall-bladder is important as a means of protection, especially to the pancreas, is evident, and this is an argument against its unnecessary removal. The greater frequency of gall-stone disease in women than in men must depend on some sexual difference; 90 per cent of the cases in women are in those who have borne children, and 90 per cent of these identify the beginning of the symptoms with some particular pregnancy. Every patient with chronic gastric distress should be questioned intelligently to obtain any former history of gall-stone colic, since this may have escaped the patient's attention. Gall-stone disease sometimes causes serious circulatory disturbances, such as endocarditis, which, though rare, is of a specific type and in its origin is coincident with the gall-stone attack. Subsequent attacks aggravate the heart action. While stones are the most common cause of cholecystitis, this is not always the case, but the patient still requires operative relief. It is usually in these cases accompanied by habitual tenderness in the region of the gall-bladder and colic is not so prominent. Complications were found in more than two-thirds of the patients operated on at Rochester. Stones were found in the common duct in 531 cases with an operative mortality of 6.5 per cent, while serious complications involving the liver, duodenum, transverse colon, etc., were the rule. Carcinoma was found in eighty-five cases (2.25 per cent). In a number of the cases slightly advanced cases of carcinoma were accidentally encountered before they had advanced sufficiently for diagnosis in removing thick-walled functionless gall-bladders, and five of these patients are still alive and well from two to six years after operation. Gall-stones are foreign bodies and Mayo asks why delay operation until complications ensue. In their experience at Rochester simple operation for uncomplicated gall-stones has had a mortality of less than 0.5 per cent, and this was due more to the condition of the patient than to the operation. While temporary palliation may be obtained with non-operative measures, the patient can only be thoroughly cured through surgery.—*American Journal Surgery*, July, 1911.

Mitral Stenosis in Childhood.—F. J. Poynton (*Clinical Journal*, July 21, 1909) says that the treatment of mitral stenosis in childhood is mainly the treatment of rheumatism. The parents should be warned of the meaning of sore throats, fleeting pains, nervousness and chorea, feverishness and pallor. If possible, such children should be taken from damp, low-lying houses, and properly clothed and their extremities protected. Large, unhealthy tonsils should be enucleated. Spring and autumn, and particularly sudden damp cold after much heat, should be a signal for added watchfulness. Early symptoms should be promptly treated by rest and warmth and the use of salicylate of soda.—*American Journal of Obstetrics*.

Tonsillectomy Not an Office Operation.—We frequently hear that it is a practice of some physicians to make the removal of enlarged tonsils and adenoids an office operation, and that the patient is permitted to start home, oftentimes a considerable distance from the physician's office, a half hour or an hour after the operation. In the case of a child, if a general anesthetic is given, the patient is permitted to be taken home before fairly well from the effects of the anesthetic. The physician who follows this practice will sooner or later be the direct cause of a funeral, and perhaps the defendant in a malpractice suit. He deserves the severest censure, for it is either ignorance or criminal carelessness which prompts him to take any such chances with a human life. The removal of enlarged tonsils, or enlarged tonsils and adenoids, is an operation which should not be performed unless the patient can be under the immediate care of the operator for at least twenty-four hours, and for a longer period if possible. Alarming and even fatal hemorrhage has been known to occur several hours after a tonsil operation, and the dangers incident to the early removal of a patient that has taken a general anesthetic are too well known to be mentioned. To even leave an operated patient in the hands of relatives and friends who are untrained in the observance of unfavorable symptoms is a risk that is inexcusable. Even the trained nurse often requires special instructions in order to keep a proper record of the pulse, which is the most important indicator of trouble arising from hemorrhage. Whenever possible, the operation should be performed in a hospital and the patient kept there for from one to four days afterward, depending on recovery. For at least four to seven days the patient should be kept reasonably quiet, and this is particularly true if the patient is an adult. To pursue any other course is to invite disaster.

Then the question of an anesthetic is an important one. Chloroform is much easier to give and is therefore preferred by the inexperienced anesthetizer. However, it is the most dangerous anesthetic, and particularly in patients of the lymphatic temperament such as found in most all adenoid cases. Ether is far safer in every way; but whatever anesthetic is used should be administered by an experienced anesthetist. Except in an emergency, no physician is warranted in placing the anesthetic in untrained hands. On the other hand, the physician who has had limited or no experience in the administration of an anesthetic has no moral right to attempt to give an anesthetic unless his work is under the supervision of one who is skilled in the administration of anesthetics. At best, the administration of an anesthetic requires the exercise of skill and judgment, based on a comprehensive knowledge of the effect of anesthetics on the human organism. To trust this work to a novice is like trusting any work to one who is wholly unfitted by skill or experience to do the work.

That more people do not die as a direct result of the incompetency of physicians is due entirely

to the fact that Nature takes a good many insults without retaliating.—*Journal of the Indiana State Medical Association*, November, 1911.

The Painless Removal of Warts.—Cates writes to the *Boston Medical and Surgical Journal* of August 3, 1911, reminding us that for the removal of warts from the human body a long array of remedies are commended for favorable notice from divers sources. In fact, the agents lauded for removal of warts are only equaled by sure cures for boils, felons and carbuncles. Patients in possession of warts will use any suggestion from any source, from conjuring to the latest pile ointment, before allowing a surgeon to operate.

This applies not only to children, but also to adults; because there is an inherent abhorrence in the human mind against the use of the knife on oneself, even for so trivial a matter as a wart. Aside from this, the average patient dreads the scar following the removal of a wart by cutting or burning, more especially if the scar is in a conspicuous place, as on the face and neck. On account of these various objections it occurred to Cates that some painless and sure agent could be used to remove warts.

Now, it is well to remember that histologically a wart consists of a fibrous stroma, containing in its meshes blood vessels and lymphatics, and covered with epithelium, which corresponds to the type of tissue in which or from which it grows. Consequently any agent that will destroy the vessels feeding this growth, without at the same time injuring normal tissue, will effect a cure. The agent that will do this with no injury to normal tissue, and no pain to the patient, and with good cosmetic effect—that is, without leaving a scar—is chloride of ethyl.

The rationale is that it coagulates the blood in the blood vessels supplying the wart, thus shutting off nutrition to the wart. As a result the wart shrivels up and drops off.

The writer states he has removed small warts with one application of the chloride of ethyl; recently he removed a seed wart the size of a ten-cent piece from the knuckle of the middle finger on the hand of a young girl by two applications of chloride of ethyl at an interval of a week.

The *modus operandi* is to take a pledget of sterile cotton wet in cold water and draw it out in a tape long enough to surround the wart and broad enough to protect the skin for half an inch or more beyond the margin of the wart. Then play a fine stream of chloride of ethyl over the wart until the wart is covered with frost, then stop.

If the adjacent skin is frozen, with another pledget of cotton wrung out of cold water rub the skin gently but vigorously about a minute. If these directions are carried out religiously, the physician will have the satisfaction of seeing these growths disappear in about a couple of weeks. Chloride of ethyl may be applied with equal effect and with equal satisfaction to moles and angiomas.—*Therapeutic Gazette*, November, 1911.

Medicinal Treatment of Uterine Hemorrhage.—Robert Asch (*Med.* March 1, 1911) says *Press*, that a possible pregnancy or abortion must first be excluded. Menstruation can be considered to be physiological only when it takes place in a certain regular manner, within certain limits which, however, are different in individual cases. Abnormal bleeding is arterial or venous. Arterial bleeding is explainable by want of contraction. Apart from the cases in which a change of form of the organ prevents equable pressure on the mucous surface, as occasionally is the case when myomata are present, failure of muscular apparatus may be a cause of the hemorrhage continuing. To arrest the hemorrhage, muscular contraction may be brought about by mechanical

stimulus, by electrical treatment, by massage or ergot. The fear that ergot will interrupt a normal pregnancy and bring on abortion is not justifiable. In all venous hemorrhages, cotarnin is called for. The hydrochlorate of cotarnin is known as stypticin. This is not a specific for bleeding, but it may arrest venous hemorrhage through its action in relaxing muscles.

Stypticin is especially useful when given four or five days before an expected period—five tablets of 0.05 gm. each. It is given again before each period until menstruation is forced back to its proper term. If in disease of the heart menstruation is excessive, stypticin or styptol may be given *per os*, more actively subcutaneously or into the muscles. The hemorrhage that results from venous stasis brought about by retroflexion of the uterus, and that is not arrested by ordinary means, calls for cotarnin. If we have not to deal with hemorrhage arising from relaxed uterine walls, if we also find no changes about the genitalia that point to venous congestion, hydrastis is in place. The writer has never seen increase of the hemorrhage with arsenic; it may, therefore, be combined with hydrastine in the treatment. When we have succeeded in bringing the menses to their normal condition, and they continue in that state without the hydrastis, arsenic may be replaced by iron.—*American Journal of Obstetrics*.

The Bearing of Pneumonia Considered as a Secondary Malady Upon Treatment.—H. A. Hare, in the *Pennsylvania Medical Journal*, November, 1911, after discussing the importance of a study of the relative ratio of pulse rate and blood pressure, says:

"It must not be forgotten that croupous pneumonia is in a large number of cases a true terminal infection, a means by which Nature brings an end to a diseased person just as the organisms of putrefaction or beetles destroy his remains if left exposed after death, after disease has sapped his powers of resistance. If that man lived in a wild state his physical feebleness would result in death because of his inability to get food or protect himself from wild beasts. In the civilized state others feed him and protect him from wild beasts of great size, but they cannot protect him completely from a wild beast called the 'pneumococcus,' against which in his younger days he was well protected by phagocytes and all the other protective processes of the body. But as we all know, age, or years of life, except they be fourscore, is not so important a factor in prognosis and treatment in pneumonia as is senile change at any age. How often do we see a man of eighty with soft vessels, fairly good urine, and a good heart, and how often we see a man at forty-five or fifty with bad vessels, bad urine, and every evidence of cardiac impairment and vascular fibrosis. Alcohol, syphilis, or a series of severe maladies or injuries may have prematurely aged him, and so at fifty all his powers of resistance may be far less than in another man at eighty, their actual ages in years having nothing to do with their actual state as to tissues and cells. In other words, all the antecedents of the patient as to inheritance, disease and habits are to be considered in reaching a prognosis and determining treatment. Or, to put it differently, given a patient who is fairly young as to years and fairly clean as to his previous history, let him be stricken by pneumonia by reason of the attack of a host of pneumococci, let him show for a time a normal ratio as to pulse and blood pressure, and let him develop a dangerous approximation of the rate and pressure, and he has a 'factor of safety,' to use a mechanical term. It is possible for us to call into play reserve energy and reserve vital resistance and to promote recovery. On the other hand, if the rate and pressure ratio is normal yet age, or disease

such as syphilis, Bright's disease or diabetes, is present, this factor of safety is missing, and, to use Whittier's lines, he is

"A singer of a farewell rhyme
Upon whose outmost verge of time
The shades of night are falling down."

"Time does not permit me to go into details as to treatment. There is no treatment of pneumonia, but there is treatment of the patient who has pneumonia, and, as just pointed out, this will vary in every case. Nor should any physician plume himself on great skill if his patient gets well, or into the slough of despond if his patient dies, if, on the one hand, a frank pneumococcal infection recovers, or, on the other, an insidious infection causes death. It is only when recovery takes place in the face of a small factor of safety that great credit is due the physician. In all cases, as I have said elsewhere, the physician should be a watchman all the time and a therapist in the sense of a drug giver only when active need arises. Let the patient get well, help him as he climbs the tree of life if he hesitates and seems as if to fall, but do not boost him up the tree so fast that he cannot get hold of anything, exhaust him by overboosting, and have him fall back into the grave just as he is near the top of his climb.

"In some cases of pneumonia, so far as the activity of the physician is concerned, it would be well if Beddoe's description of Skoda held true. Beddoe says that Skoda 'had the reputation of despising drugs, but that was really not the case; the fact was that he used them only when the indications for their employment were distinct, but not as a matter of routine. Thus, standing at the bedside of a fine, vigorous, young peasant, he would say, Gentlemen, this patient from acute left pneumonia suffers. Some in such a case would mercury exhibit; others tartarized antimony would employ; but seeing that this man well constituted is, and well nursed and cared for will be, it is to be expected that he, without any of these drugs, perfectly well and that in short time will become. Wherefor (to his assistant) Herr von Speckhausen, recipe, etc. And he would proceed to order a solution of diluted raspberry syrup.'

"On the other hand, like Skoda, each of us should recognize the conditions under which active medication is essential, and fearlessly employ the drugs which are needed to meet the needs of the patient."

The Modern Treatment of Syphilis.—Schamberg (*Pennsylvania Medical Journal*, November, 1911) tells us that as soon as a diagnosis of syphilis is made, massive early therapy should be instituted. No physician can scientifically treat syphilis today without recourse to the Wassermann test. Especially is this true in the light of the introduction of salvarsan by Erlich. No remedy in the tolerated dose has such a powerful destructive influence on the spirochaetes as salvarsan, and the agent has proved safe. Wechselman has given 4,500 injections (2,500 subcutaneous and 2,000 intravenous) and has never observed intoxication of the drug. In order to make a profound and early influence upon syphilis in the primary and secondary stages, the patient should receive an intravenous infusion of salvarsan. Many of the foreign syphilologists are giving second intravenous injections of salvarsan in early syphilis within a week or two after the first administration, and some are administering it three or four times.

Neiser follows salvarsan treatment with mercury. Lowenburg gives salvarsan, then employs mercury, following with salvarsan. Kromayer prefers repeated intravenous injections of fractional doses as often as several times a week. He has given to a single patient as many as eighteen injections of 0.2 grams each during a period of six weeks without unpleasant

results. Schamberg concludes this interesting article as follows:

"Salvarsan has been proved to be efficient and relatively harmless, and the intravenous injection has been demonstrated to be the most efficacious mode of administration, but much remains to be learned about the frequency of administration, dose, its use through other avenues, etc.

"The plan of treatment for early cases, which I am tentatively following, is to give two intravenous injections at an interval of ten days or two weeks, and one week later to begin fractional intragluteal injections of salvarsan suspended in oil; this in turn is followed by a course of mercurial injections or inunctions. In cases doing very well, the second intravenous injection may be omitted and the oil suspensions begun earlier. The combination of intravenous and intramuscular injections appeals to me for the reason that we secure, first, as complete a sterilization as possible by the hemic route and that we then supplement the deposit of arsenobenzol in the system in order to have a more continued effect of the drug upon the parasites that have escaped destruction.

"Politzer of New York has for some time been employing a full dose intragluteal injection of salvarsan in oil following the intravenous use of the drug. He then gives the iodids and has been able almost uniformly in late cases to secure negative Wassermann reactions.

"I prefer the use of small doses of salvarsan in oil suspension given at frequent intervals rather than the full dose in one injection, for the reason that the fractional injections are in my opinion better absorbed and are decidedly less painful.

"Scholtz and Salzberger. *Arch. für Derm. u. Syph.*, Vol. 107, 1911

"Professor Scholtz of Konisberg and his collaborator, Salzberger, have carefully studied the action of salvarsan on tissues when injected subcutaneously or into the muscles. The oil suspensions of salvarsan are less irritant than the alkaline solution, but even these produce necrosis. Microscopically, there is noticed twenty-four hours after the injection necrotic changes in the musculature and beginning thrombosis of the vessels. The injected oil is completely resorbed in six hours, leaving the salvarsan as a dark homogeneous mass in the center of the necrotic focus. At the end of six days the central portion is completely necrotic and the vessels extensively thrombosed. In the center of the necrosis are found particles of salvarsan; even at the end of four weeks considerable quantities of salvarsan in the form of crumbly masses are still present.

"With multiple small injections, the area of necrosis would naturally be much less extensive and the absorption more rapid.

"While microscopic examination shows that salvarsan in oil produces necrosis of tissue just as it does in the various aqueous media and in the same manner as insoluble mercurial injections, clinically there is with the administration of fractional doses but little evidence of such effect. I have given over one hundred of the small oil injections and have found the pain insignificant, far less pronounced than mercurial injections. Some patients have no pain whatsoever. Sometimes after a lapse of forty-eight hours, slight infiltration and tenderness develop, which gradually subside. Averaging all of the cases, the injections have given less discomfort than any anti-luetic treatment of the kind that I have ever employed. I give an intragluteal injection of 0.1 gram of salvarsan in one and a half cubic centimeters of sterilized oil of sweet almonds, two to three times a week, until about six injections are given, depending on conditions. I have the oily suspensions put up in spindle-shaped ampoules so that the ends can be filed off

and the fluid poured into the rear end of a glass syringe. An irido-platinum needle sterilized in a flame is inserted into the buttocks, and the needle is inspected before the syringe is attached, to be sure that no blood issues forth, showing that it has not entered a vein. While such an incident is rare, it is well to guard against it both in giving mercurial and salvarsan injections, as serious complications could well arise.

"The fractional salvarsan oil injections may be used in early syphilis after the intravenous use of the drug or they may be used in latent or late cases alone or combined with other methods of treatment. As to their efficacy, I have seen gummata of the tibia begin to improve after one injection, and disappear within a week after three injections. I have been favorably impressed with the effect of these injections upon the Wassermann reaction, but the number of patients under observation for a sufficient period is not large enough to warrant presenting statistical data.

"Despite the enthusiasm which Ehrlich's great remedy for syphilis has aroused, it must not be thought that *mercury* is to be relegated to the list of obsolete drugs. It is an old and tried friend and should not be discarded. While salvarsan and mercury are both powerful spirillicides, they may have other effects than merely upon the parasites. Inasmuch as their ultimate chemistry in the body is not known, it is well to utilize the virtues of both remedies. After a course of salvarsan in early syphilis, it is advisable to administer a series of mercurial inunctions or injections. The patient should then remain without treatment for three or four weeks and a Wassermann test be made. The result of this should determine the subsequent treatment.

"The action of the iodids in syphilis is not known. The iodids, in all probability, do not act directly upon the spirochaetes, but in some indirect or secondary manner. Tomaszewski demonstrated that while mercury exercised a preventive influence on the development of syphilis in monkeys and rabbits, the iodids failed. Despite vigorous iodid treatment, the disease developed in the usual time. The iodids seem to exert their most favorable influence upon granulation tissue sparsely inhabited by spirochaetes.

"The iodids may be found of value in late syphilis as a treatment precedent to salvarsan administration, by acting as absorbents and opening up obstructed lymph and vascular channels. I am using the iodids on this basis at the present time."

Reports of Medical Societies.

COUNTY MEDICAL SOCIETIES.

Resolutions on the Death of Dr. M. D. McClain, Passed by the Pulaski County Medical Society.

To the Pulaski County Medical Society:

We, your committee appointed to draft suitable resolutions on the untimely death of Dr. M. D. McClain, an honored and useful member of this society, beg to submit the following:

Whereas, We learn with profound regret the untimely death of our brother practitioner, Dr. M. D. McClain, who was an honest and conscientious physician, one always ready to answer the call of suffering humanity, an upright Christian gentleman of exemplary habits and a kind and devoted husband and father;

Resolved, That we deeply deplore his sad and unexpected death, and hasten to extend our heart-felt sympathy to his grief-stricken family and relatives in their great loss and ours; and be it further

Resolved, That a copy of these resolutions be spread on the records of this society and a copy be sent to the family of the deceased, and to the daily papers.

W. H. MILLER,
E. E. HODGES,
JAS. H. LENOW,
J. G. WATKINS,
Committee.

PULASKI COUNTY.—Regular meeting of November 27, 1911. Meeting called to order in the School Board building, Eighth and Louisiana streets, at 8:20 p. m., by President Vaughan, with the following members present: J. G. Watkins, Holiman, Meriwether, Judd, Bathurst, Johnston, Kirby, E. E. Hodges, McRae, Smith, Davis, Snodgrass, Vinsonhaler, Dooley and Dr. Dodson, a visitor.

The minutes of the last regular meeting, and of the special meeting of November 15, were read and approved.

There being no clinical cases reported, the essayist of the evening, Dr. J. G. Watkins, read a very interesting paper on the subject of "Headaches of Ocular and Nasal Origin." The paper was discussed and complimented by Drs. Snodgrass, Smith, Davis, Kirby, Vinsonhaler and others, and Dr. Watkins made a brief reply to some points and questions advanced.

Under the Reports of Committees, Dr. Kirby, of the Credentials Committee, made a favorable report on the applications of Drs. S. W. Allen and Thomas H. Cates for membership in the society and they were both unanimously elected to membership.

Upon request of Dr. Dodson, his application for membership was withdrawn, and the secretary was directed to return the application and fee to him at once.

Under the head of new business, Dr. Meriwether presented the question of holding a public meeting in January, to be addressed by Dr. McCormick, the traveling representative of the American Medical Association, on some subject of importance and interest to the laity.

After some discussion it was voted to authorize Dr. Meriwether to arrange the date for the meeting, and the details of the meeting to be taken care of by the proper committee of the society.

J. B. DOOLEY, *Secretary*.

WASHINGTON COUNTY.—The Washington County Medical Society held an interesting adjourned session at Fayetteville, November 7, 1911. There were present: Drs. E. F. Ellis, A. S. Gregg, Nina V. Hardin, P. L. Hathcock, Phoebe Lininger, Charles B. Paddock, James R. Southworth, H. H. Towler, Wallace of Fort Smith, W. B. Welch, H. D. Wood, W. N. Yates, John Young and F. B. Young.

Dr. Phoebe Lininger brought before the society a patient having tumor of the breast. The committee to examine the patient reported malignant tumor, and advised removal of the gland. There was slight difference of opinion as to whether conservative operation or complete radical operation should be done. Almost all thought that nothing short of complete radical operation was to be advised.

Dr. W. B. Welch talked on "Ante-Partum Hemorrhage," and Dr. Charles B. Paddock read a paper on "Puerperal Eclampsia." These subjects were fully discussed.

Several important committees reported, most important of which was the committee composed of Drs. F. B. Young, W. N. Yates and W. T. Gabbert, appointed to formulate explicit directions for nurses and attendants, caring for patients suffering from contagious or infectious disease, these directions to be printed and a copy left in families where these diseases exist. Dr. Young read instructions for caring for typhoid, and Dr. Yates for tuberculous patients, so as to prevent the spread of these diseases.

The society then adjourned till the annual meeting (election of officers and payment of dues) at Fayetteville, 1:30 p. m., January 2, 1912. Program for the meeting:

1. Intestinal Obstruction; Causes and Treatment—Dr. A. S. Gregg. Discussion, Dr. T. W. Blackburn.

2. Prevention and Treatment of Abortion—Dr. Phoebe Lininger. Discussion, Dr. J. E. Martin.

3. Treatment of Chronic Nephritis—Dr. J. W. Fergus. Discussion, Dr. E. F. Ellis.

NINA V. HARDIN, *Secretary*.

JOHNSON COUNTY.—The Johnson County Medical Society did not hold a meeting on the 4th of December, and Dr. W. R. Hunt will read his paper on "Erysipelas" at the January meeting.

Dr. J. M. Cowan of Lamar died December 7, of pneumonia, after a brief illness.

Dr. J. J. Stewart of Lamar has sold out to Dr. John Bradley of Dublin, and will locate at Catcher or Shibley, in Crawford County. Dr. Bradley has already moved to Lamar.

Dr. Johnson of Hagarville has moved to Dublin to succeed Dr. Bradley.

Dr. George L. Hardgraves, of the class of 1911, Medical Department, U. of A., has located at Clarksville.

Dr. W. J. Hunt, also of the class of 1911, Medical Department, U. of A., has located at Smeadley, having formed a partnership with Dr. E. C. Hunt. Dr. Boyer of the same class has located at Hartman.

FRANKLIN COUNTY.—The Franklin County Medical Society held its regular meeting Tuesday, December 5. The president, Dr. Harrod, presided. There were present Drs. Turner, Warren, Rambo, Houston, Porter, Butts, Post, Wear, Blackburn and Douglass.

The Memorial Committee reported as follows:

"On the 16th day of September, 1911, our hearts were saddened by the death of our worthy friend and co-worker, Dr. T. J. Prewitt. He was born September 22, 1881, graduated from the Memphis Hospital Medical College in 1902, married Miss Sammie Greenwood in March of the same year, and to this union three children, two girls and one boy, were born.

"He practiced his profession in and around Denning most of the time since his graduation. His aspirations were high, his work conscientious. He was a husband and father heart and soul, never failing friend, and withal an upright and honorable man.

"The Franklin County Medical Society has lost a worthy and efficient member, his family all that a family could lose in tender love and watchful care, the community a competent physician and worthy citizen.

"R. J. BUTTS,

"H. H. TURNER,

"THOS. DOUGLASS,

"Committee."

Dr. Turner, chairman of a committee to investigate charges of unprofessional conduct against Dr. Post, reported that the committee recommend that no trial be held. The chairman talked earnestly of the necessity of cordial relations amongst members of the society,

and urged that we should stand together and be mutually helpful. The report of the committee was adopted.

The annual election of officers was held, the time having been changed from the May meeting to the December meeting. Dr. E. W. Blackburn was elected president; Dr. G. D. Warren, vice president; Thomas Douglass, secretary-treasurer. Dr. R. J. Butts was elected delegate to the State Society, and Drs. W. M. Wear and W. C. Porter alternates.

On motion of Dr. Butts it was decided that the society take up the post-graduate course of study for the coming year.

THOS. DOUGLASS, *Secretary*.

DISTRICT MEDICAL SOCIETIES.

THIRD DISTRICT.

The Brinkley meeting of the Third District Medical Society was held at Brinkley on November 22 and 23, and was well attended by the members of the society.

More than fifty physicians were in attendance, and a real enjoyable time was had, besides much work for the benefit of the members. The place of meeting was in the opera house, which was a model of convenience for such a meeting.

The society was the guest of the Monroe County Medical Society, and nothing was left undone to make the guests feel at home and enjoy themselves.

The secretary, Dr. T. J. Stout, ably assisted by Drs. McKnight and Murphy, all having the cooperation of the citizens of Brinkley, had many pleasant things for the visiting doctors, their wives and sweethearts.

Wednesday night a reception was held at the high school building, at which all the beauty and chivalry of Brinkley was gathered, and fair women and handsome men vied with each other in administering to the guests.

The doctors and visitors were shown over the lovely and well-equipped building, it only having been completed during the last year.

During the evening the immense audience was entertained in the spacious auditorium by talks from doctors from over the state, notably among them being Dr. Robert Caldwell, Dr. F. Vinsonhaler and Dr. Morgan Smith of Little Rock. The addresses were on timely topics relative to better sanitary measures and general health hints.

Wednesday was taken up with scientific discussion of many phases of the medical profession, and the papers were widely discussed.

A seven-course banquet was served at the Arlington Hotel in the evening.

The society elected for the year 1912, Dr. T. J. Stout, Brinkley, president, and Dr. B. L. Hill, Stuttgart, secretary. The next place of meeting has not been determined, but will be announced in *The Journal* at the proper time.

T. B. BRADFORD,

Councilor Third District.

FIRST DISTRICT.

The Greene County Medical Society met in extra session Tuesday, October 30, in the A. O. U. W. hall.

The opening program consisted of a banquet served by the ladies of the First Christian Church. Those present were Dr. Morgan Smith, Little Rock; Dr. and Mrs. M. C. Hughey, Rector; Dr. J. W. Ramsey, Jonesboro; Dr. W. J. Robinson, Portia; Dr. G. A. Warren, Black Rock; Dr. G. M. Black, Poca-hontas; Dr. Parrish, Rector; Dr. H. Lynch, Rector; Dr. Jones Lamb, Beech Grove; Dr. Verser, Brighton; Dr. Thad Cothren, Walcott; Dr. R. E. Bradsher, Marmaduke; Dr. and Mrs. P. L. Dickson, Dr. and Mrs. E. S. Baker, Dr. and Mrs. J. G. McKenzie, Dr. and Mrs. R. J. Haley, Dr. and Mrs. W. R. Owens, Dr. H. U. Dickson, Dr. G. T. Hopkins, Dr. F. M. Scott, Dr. Olive Wilson, Mrs. A. G. Dickson, Mrs. C. A. Hardesty, Misses Allen, Seeley, Ledbetter and Crews, nurses from the Paragould Sanitarium, Hon. S. R. Simpson and Rev. Fred Little, all of Jonesboro.

The post-prandial program was taken up at 1:30, with Dr. M. C. Hughey as toastmaster.

Rev. Fred Little talked entertainingly on the "Layman's View of the Physician's Good and Bad Points."

"The Doctor from a Lawyer's Standpoint," by Hon. S. R. Simpson. Mr. Simpson assured us he is thoroughly afraid of us, and cannot feel safe with one of us hanging around.

Hon. G. O. Light responded to the toast. "The Physician from a Farmer's Standpoint." Mr. Light's address was heartily applauded.

"The Doctor as a Business Man" was responded to by Dr. Thad Cothren. The doctor spoke impressively of the great need of

not losing sight of the business end of his profession, that his family and himself may be provided for in that day when he can no longer work.

"The County Society" was handled tactfully by Dr. G. A. Warren. Those of us who know Dr. Warren well, know that the county society is his first love.

The closing number, "Organization," was responded to by Dr. Morgan Smith. Dr. Smith spoke at length on the necessity of harmonious organization in order to successfully work along lines of professional uplift. He also gave an interesting account of the work done along legislative lines. This work being of as much interest to the laity as to the profession, and, from a monetary point of view, more so, because "health is wealth." A public health bill such as the Arkansas Medical Society has in view will place us to greater advantage in combating preventable diseases.

This ending the program, a few minutes were spent in a social way. Then Dr. Jones Lamb, president of the society, called the meeting to order. Dr. Hughey, councilor for the First District, then took charge and proceeded to reorganize the First District Medical Society. The following officers were elected for the ensuing year: Dr. G. A. Warren, president; Dr. G. M. Black, vice president; Dr. Olive Wilson, secretary and treasurer. Dr. Ramsey then read a paper entitled "Mastoiditis," which was discussed freely by the society.

Dr. Morgan Smith gave a microscopical demonstration of hookworm eggs.

The society adjourned to meet in Jonesboro the second Tuesday in March.

OLIVE WILSON, *Secretary*.

TRI-STATE MEDICAL SOCIETY.

(Arkansas-Louisiana-Texas.)

Eighth Annual Meeting of the Tri-State Medical Society of Arkansas, Louisiana and Texas, Held at Texarkana, November 14 and 15, 1911.

The eighth annual meeting of the Tri-State Medical Society of Arkansas, Louisiana and Texas was held in the west side City Hall at Texarkana, November 14 and 15, 1911.

On account of the fact that the Northeast Texas Medical Society met on the same dates, a joint meeting was held, on the first day of

which Dr. W. J. Matthews, Naples, Tex., president of the Northeast Texas Medical Society, and on the second day Dr. Thomas P. Lloyd of Shreveport, La., president of the Tri-State Medical Society, presided.

The attendance was very gratifying, and the papers read and discussed were upon a higher plane than ever before. Year by year at each annual meeting the gradual but substantial growth of the Tri-State Medical Society is making itself manifested, and its permanency is evidenced by the recruits which it is annually gathering within its folds.

A feature of the society was the election of Dr. E. H. Martin of Hot Springs, Ark., as president for the coming year. It is the first time that the society has reached as far into the interior of any of the three states for an officer, which shows that the interest and enthusiasm in the welfare of this organization is rapidly permeating the entire medical profession of the three states.

The society was called to order by Dr. J. W. Matthews, presiding, with Dr. Lloyd of Shreveport on his left and the secretary at his desk.

The program was opened by an invocation by Rev. Dr. Carroll, followed by addresses of welcome on behalf of the twin cities, by Mayor A. B. DeLoach of Texarkana, Tex., and Mayor J. P. Kline of Texarkana, Ark., which were responded to by Dr. T. P. Lloyd, president of the Tri-State Medical Society, on behalf of the visiting fraternity.

The scientific program was then begun. The program was published in the November number, and was contributed to by some of the most prominent physicians and surgeons of the south.

BUSINESS MEETING.

The business meeting was called to order by the president, Dr. T. P. Lloyd, Shreveport, La.

The minutes of the last session were read and approved. The following were then elected to membership, the applications having been approved previously by the Membership Committee, composed of R. H. T. Mann, Texarkana; E. H. Martin, Hot Springs; C. A. Smith, Texarkana:

W. J. Matthews, Naples, Tex.; G. P. Sanders, McNeil, Ark.; John D. Covert, Fort Worth, Tex.; William V. Laws, Hot Springs, Ark.; W. G. Allen, Vonverse, La.; T. E. Full-

er, Texarkana; J. J. Dial, Sulphur Springs, Ark.; W. S. Hartt, Marshall, Tex.; E. A. Hawley, Texarkana, Ark.; J. K. Smith, Texarkana, Ark.; V. A. Oats, Mandeville, Ark.; Dr. H. A. Murphy, Wesson, Ark.; Dr. W. J. Pitman, Greenwood, Ark.

The officers were then elected by acclamation, the secretary being instructed to cast the vote of the entire society for the positions as follows:

President—E. H. Martin, Hot Springs, Ark.

Vice Presidents—F. T. Kittrell, Texarkana, Ark.; J. F. Rosborough, Marshall, Tex.; J. E. Knighton, Shreveport, La.

Councilors—To fill the unexpired term of T. E. Kittrell, made vacant by election as vice president, T. E. Fuller, Texarkana, Ark.

New Councilors—For Arkansas, R. L. Grant, Texarkana, Ark.; W. H. Hartt, Marshall, Tex.; Preston Hunt, Texarkana, Tex.; T. B. Younger, Fisher, La.; C. P. Munday, Shreveport, La.

Secretary-Treasurer—J. M. Bodenheimer, Shreveport, La.

Shreveport was selected as the next meeting place, after considerable discussion. Marshall made a bid for the meeting, but on account of the fact that Marshall sent only two members to the meeting, the society felt that the Marshall fraternity was not manifesting enough interest in the society, and therefore it was voted to meet at Shreveport next year.

Dr. Knighton moved that the program hereafter be arranged in sections, and that the secretary be ex-officio chairman of the Program Committee with power to appoint chairmen of sections.

Dr. Martin moved as a substitute that the secretary-treasurer, vice presidents and councilors constitute Program Committee, with the secretary as ex-officio chairman.

Dr. Knighton then withdrew his motion and Dr. Martin's substitute was carried unanimously.

Dr. Ragan moved, duly seconded, that a vote of thanks be extended to the Texarkana city officials, the local fraternity, the press and others who aided so materially in the success of the meeting, and had been so cordial in their hospitality. Carried by a standing vote.

The secretary-treasurer then read his financial report, which was approved, bills as rendered being approved and allowed.

It was moved and duly seconded that the constitution be changed so that all reputable licensed practitioners of medicine be eligible to membership.

Dr. G. P. Sanders, McNeil, Ark., who had arrived late, asked that he be allowed to exhibit a case for diagnosis.

There being no further business, the society adjourned.

J. M. BODENHEIMER, *Secretary*.

News Items.

Medical College Merger in St. Louis—On October 18 preliminary articles of agreement to the merger of the American Medical College and the Medical Department of Barnes University were signed. Two days later the American Medical College secured a five-year lease of the Barnes University building, on Garrison and Lawton avenues, together with the equipment therein contained. The Barnes building was formally turned over to the trustees of the American Medical College on October 21. The laboratory equipment of the American Medical College was moved into the Barnes building and added to the equipment of the Barnes Medical College. Lectures were continued in both institutions without interruption during the time negotiations were pending. The medical course will be given under the corporate name of the American Medical College (in affiliation with Barnes University).

This action marks a forward step toward higher medical education in St. Louis. The union carries with it the Christian-Centenary Hospital as well as the American Hospital.—*Journal Missouri Medical Association*.

Dr. C. M. Lutterloh Elected President Tri-State Association—At the twenty-eighth annual meeting of the Tri-State Medical Association of Mississippi, Arkansas and Tennessee, Dr. C. M. Lutterloh of Jonesboro was elected president. Dr. Lutterloh has long been a loyal member of the State Society, and we wish him success in maintaining the high standard of the Tri-State Association.

St. Luke's Hospital—St. Luke's, the new and modern private hospital built by Dr. J. P. Runyan, will be opened for the admission of patients about January 15. This is one of the most beautifully appointed private hospitals in the South.

Hookworm Investigation in Texas—Dr. Charles W. Stiles, of the U. S. P. H. and M. H. S., Washington, D. C., is making a sanitary survey in certain portions of Texas to determine the degree of hookworm infection. Dr. Stiles will make a report of his investigation to the Texas State Board of Health, and if the degree of infection is sufficiently heavy to justify action, measures will be put in operation to eradicate the disease.

American Public Health Association—The American Public Health Association held its thirty-ninth annual meeting at Havana, Cuba, December 5-9. Amongst the many important and interesting subjects in the program are symposia on uncinariasis, pellagra and anterior poliomyelitis.

Dr. Sajous Becomes Supervising Editor of New York Medical Journal—It is announced that Dr. Charles E. de M. Sajous of Philadelphia has accepted the position of supervising editor of the New York

Medical Journal. Dr. Sajous will carry a large editorial experience to the Journal, which, no doubt, will be reflected in its pages.

Southern Medical Association.—The fifth annual meeting of the Southern Medical Association was held at Hattiesburg, Miss., November 14-16. Dr. J. M. Jackson of Miami, Fla., was elected president, and Dr. Seale Harris of Mobile, Ala., reelected secretary. The next meeting will be held in Jacksonville, Fla.

Free Lectures.—The supervisor of lectures in the Department of Education of New York reports that 955,704 persons attended them from October, 1910, to May, 1911. The lectures were given in several languages and dealt with tuberculosis and prophylaxis in general.

President Texas Medical Society Dead.—Dr. David R. Fly of Amarillo, president of the Texas State Medical Association of Texas, died at Fort Worth, November 29.

Anti-Tuberculosis Society Organized.—The Franklin County Anti-Tuberculosis Association, of which Dr. E. W. Blackburn of Ozark was elected president, was organized at Ozark on November 27. An active campaign will be undertaken by the association and a course of popular lectures is proposed.

Personals.

Dr. J. P. Runyan of Little Rock has returned from his Eastern trip. He visited Baltimore, Philadelphia, New York, and returned by the way of Cleveland.

Dr. H. H. Niehuss has been appointed state manager for Arkansas for the Tennessee State Life Insurance Company, and has business offices in the State Bank building. Dr. Niehuss is now engaged in organizing a field force and appointing medical examiners.

Dr. H. H. Kirby has returned from his honeymoon.

Dr. T. B. Bradford, state director of sanitation, passed through Little Rock on the 5th, en route to Ashley County, where he is making a sanitary survey to determine the degree of hookworm infection and the rural toilet index.

Drs. Hodges and McNeil have moved their offices from the fifth to the fourth floor of the State Bank building.

Dr. F. T. Murphy, secretary of the State Board of Medical Examiners, was a recent visitor to Little Rock.

Reading Notices.

ANTIDIPHTEHRIC SERUM AND GLOBULINS.

In their current announcements to the medical profession it is noted that Parke, Davis & Co. give equal prominence to their antidiphtheric serum, which they have produced unchanged for many years, and the newer "globulins," which they have been marketing for a number of seasons.

The globulins, as is perhaps known to most practitioners, is antidiphtheric serum with the nonessential portions eliminated. Compared with the normal serum, it provides a corresponding number of antitoxic units in lesser bulk, permitting in consequence a smaller dose, which probably accounts for its apparent growth in favor among physicians.

Both the natural and concentrated products, of course, bear the company's guaranty of purity and

efficacy. They are evolved in the blood of healthy, vigorous horses and are prepared under the supervision of expert bacteriologists and veterinarians. The tests, bacteriological and physiological, to which they are subjected during the process of manufacture, are thorough and elaborate.

The C. V. Mosby Company of St. Louis has announced the publication of a book on pellagra, to be ready by January 1, 1912. This book is being prepared by Dr. Stewart R. Roberts of Atlanta, Ga., who has just returned from Italy, where he studied the disease in its natural habitat. While in Europe the doctor made extensive research regarding the etiology and treatment of pellagra, and the data contained in the book will reflect the latest and best work that has been done in connection with this disease, making it a reliable guide to those seeking information on the subject.

SPECIAL WESTERN NUMBER.

In furthering the plan of producing special issues of the *American Journal of Surgery*, composed of contributions by surgeons residing within a certain geographical area, yet of international reputation, there will be issued in the early part of 1912 a SPECIAL WESTERN NUMBER of this magazine.

Subjects and those to contribute:

"The Operation of Gastroenterostomy," by William J. Mayo, Rochester, Minn.

"The Surgery of Tendons," by John B. Murphy, Chicago, Ill.

"Operative Treatment for Graves Disease," by George W. Crile, Cleveland, O.

"Colonic Intoxication," by J. E. Binney, Kansas City, Mo.

"Practical Points in the Surgical Treatment of Exophthalmic Goitre," by A. J. Ochsner, Chicago, Ill.

"Brain Surgery Technique," by J. Rilus Eastman, Indianapolis, Ind.

"Treatment of Abscesses and of the Necrotic Foci Resulting from the Use of Salvarsan," by A. Ravolgi, Cincinnati, O.

"Treatment of Prostatic Obstructions," by E. O. Smith, Cincinnati, O.

Subject not announced, H. Tuholske, St. Louis, Mo.

"Artificial Tendons and Ligaments in the Surgical Treatment of Paralysis," by Nathaniel Allison, St. Louis, Mo.

"Uterine Cancer," by John C. Murphy, St. Louis, Mo.

"Arthritis Deformans," by Leonard W. Ely, Denver, Col.

"Acute Angulation and Flexure of the Sigmoid, as a Causative Factor in Epilepsy, with Special Reference to Treatment," by W. H. Axtell, Bellingham, Wash.

The character of contributions prepared by these well-known surgeons are of such a nature as to make this number particularly interesting.

Book Reviews.

Little's Epitome of Anatomy.—A manual for students and practitioners. By John F. Little, M. D., of the Jefferson Medical College, Philadelphia. New (second) edition, enlarged and thoroughly revised. Twelve mo., 491 pages, with 75 engravings. Double number. Cloth, \$1.50 net. The Medical Epitome Series. Lea & Febiger, publishers, Philadelphia and New York, 1911.

Little less than a comprehensive text and more than the usual compend, it is a little book that presents more than the mere essentials of human anatomy. Unimportant points have been left out and only matter which has a useful and practical bearing has been included. Prof. E. A. Spitzka, the well-known anatomist, has contributed valuable suggestions to the anatomy of the nervous system. Dr. John F. Little, of the Jefferson Medical College, made the revision of this edition, and the book is a valuable one for students in their every-day work, and busy practitioners for quick reference.

Electricity, Its Medical and Surgical Applications, Including Radiotherapy and Phototherapy.—By Charles S. Potts, M. D., professor of neurology in the Medico-Chirurgical College of Philadelphia, with a section on electrophysics by H. C. Richards, Ph. D., and a section on X-rays by H. K. Pancoast, M. D., of the University of Pennsylvania. Octavo, 509 pages, with 356 illustrations and six plates. Cloth, \$4.75 net. Lea & Febiger, publishers, Philadelphia and New York, 1911.

Professor Potts has adopted a new and very original method of handling his subject, and has accomplished this most thoroughly, yet plainly and concisely. To quote from the preface:

"The custom hitherto has been to consider the physiological action, therapeutic uses, and methods of application of each form of current separately. In this volume, on the contrary, these subjects have been discussed collectively, according to a medical rather than a physical subdivision. In other words, instead of devoting one section exclusively to the constant current, another to the static current, and so on, the author has grouped these modalities according to the effects produced. Thus, for instance, in discussing the action of the electric current on metabolism, the actions of all modalities on this process have been grouped. A similar plan has been followed in the description of therapeutic procedures, for instance, the methods of using and comparative values of all forms of current in stimulating motor nerves and muscles have been presented in one chapter. This plan offers distinct advantages, since the indications for treatment lead at once to the determination of the question whether electricity would be of benefit, and if so, the form of current which would secure the best results. Such an arrangement is scientific instead of empirical. It may be said to be the only plan which affords the highest practicality for the

purposes of the physician and surgeon, as it presents the subject of electricity from the standpoint of its clinical uses, instead of following the arrangement customary in books on physics and bringing in the medical applications incidentally and disconnectedly."

Numerous cross-references enable the reader to pursue any line of knowledge given in this work, and in the section on therapeutics of individual diseases the references to the physiological action will be found convenient.

The book opens with a section on the physics of electricity, from the pen of Dr. Horace Clark Richards, professor of mathematical physics in the University of Pennsylvania. Dr. Potts then follows with sections on electrophysiology, electrodiagnosis and prognosis, general electrotherapeutics, methods of obtaining general and local effects by indirect action of electricity, such as the Finsen light, and special electrotherapeutics. The volume closes with a section on the application of the X-rays, written by Dr. H. K. Pancoast, professor of roentgenology in the University of Pennsylvania, than whom no specialist on the subject stands higher. The text is elaborately illustrated. The work is moderate in size, clear in its presentations, comprehensive, modern, and suitable alike for the physician and surgeon, as well as for the student.

Cyclic Vomiting in Children.—Comby (*Arch. de Med. des. Enf.*, October, 1909) gives details of 104 cases of recurrent attacks of uncontrollable vomiting in children. The attacks last for one or several days (the patient being apparently well in between), and are found in children generally between the ages of two and six years. The sexes are affected equally, 50 of the author's cases being boys and 54 girls. In six cases two or three members of a family were affected. In 62 there was a neurotic and gouty family history. Dyspepsia or some infectious disease frequently preceded the onset of the vomiting, but appendicitis was one of the commonest antecedents. Ten cases were fatal, but in these fatty degeneration of the liver and gastrointestinal lesions were found. The attacks come on suddenly with constipation and great prostration. Vague abdominal pain is sometimes complained of. The temperature at times is high, but is not always raised. Comby found appendicitis in fifty of his cases, and he regards appendicectomy as the best means of stopping the vomiting. Treatment consists in giving alkalies to contract the evident acid intoxication, and during an attack lavage may arrest the vomiting. The author further advocates the administration of powders containing .25 gram each of calcined magnesia, benzonaphthol and sodium bicarbonate with .01 gram of powdered nux vomica twice a day for ten days at a time. The vomiting recurs every month in some cases, and in others at longer or more irregular periods. A sweet or acid odor of the breath is present just before or during the attacks.—*British Journal of Children's Diseases.*

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CONTENTS.

Original Articles:

- Rheumatism and Infection of Joints, by M.
G. Thompson, M. D., Hot Springs..... 217
Commotio Cerebri, Contusion, by Jos. B.
Wharton, M. D., El Dorado..... 224
Extra-Uterine Pregnancy, by Jas. A. Foltz,
M. D., Fort Smith..... 226

Editorials:

- The Hot Springs Meeting..... 229
Dr. Morgan Smith Resigns..... 230
A Weak Spot Discovered..... 230

Department of Medical Jurisprudence:

- Contract Between Physician and Patient—
Physician's Obligation, by Hon. R. L.
Floyd of the Little Rock Bar..... 230

Editorial Clippings:

- Pseudo-Science 232
Fee-Splitting 233
See How They Squirm!..... 234

Miscellaneous:

- Sexual Education by the Family, by Science,
by Morality, and by Hygiene..... 228
Puritus Ani..... 234
Epidural Injections for Backache..... 235
Fever 236
Some Aspects of Abdominal Ptosis..... 236

County Societies:

- Jefferson County..... 237
Independence County..... 237
Boone County..... 237
Hempstead County..... 238
Dallas County..... 238
Lee County..... 238
Faulkner County 238
Greene County 238
Marriages 238

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Original Articles.

RHEUMATISM AND INFECTION OF JOINTS.*

By M. G. Thompson, M. D.,
Hot Springs.

It is with hesitancy and some degree of embarrassment that I venture to speak on this subject, for doctors are, like all men, "slaves to their former teachings and slaves to their sacred text-books, be they ever so old." Many of you will remember that I appeared before this society at Texarkana in 1904 and advanced principles antagonistic to the orthodox teaching of that day. You remember the severe criticism I received, and that some were so unkind as to appeal to the house to suppress the publication of my paper. So today, if I depart from the text-book teachings of rheumatism, I hope you will be kind enough to remember that what is heterodoxy today may be orthodoxy tomorrow.

The great obstruction to our advance in knowledge of rheumatism has been our not

having a definite etiology. The writers of text-books deal in vague and uncertain terms, because each is afraid of the criticism of other writers, for when you go against established opinions you are branded as an heretic, and though some may be too polite to say it in words, down in their hearts they censure you.

But today, putting aside my hesitancy and assuming the authority of speaking from personal observation and experience, I define rheumatism to be a physiological defect of the animal economy; or, to be more explicit, it is the by-products of an abnormal digestion.

One of the great principles is to look at the habits and diet of those who are predisposed to rheumatism. As a rule they are, or have been, great meat eaters, and trouble arises from the ptomaines of meats and from the products of the butcher shops. But I would not forget that meats are not the only articles of food to impair digestion. I have seen patients in apparent health who could not take certain acids, and when they partook of a dozen fresh strawberries it produced a toxemia of a distressing character, and you have many times seen patients who told you they had taken quinin with impunity, but now it produced rash and

*Read in the Section on Medicine at the Thirty-fifth Annual Session of the Arkansas Medical Society, held at Fort Smith, May 3-6, 1911.

toxemia. With these patients there had been a physiological change so as to disturb the chemical process of perfect digestion.

Now, if rheumatism is the by-product of an abnormal digestion, in the first hour of an attack if you give heroic purgation you may abort the disease; but to accomplish this, the patient must be armed with ten-grain doses of calomel, epsom salts and a fountain syringe, with perfect instructions to have eight or ten operations in a few hours. This will stop the physiological change, for you are fighting the forming line of an inflammation. Later you fight an active inflammation with well-fortified exudations.

I have had some of my colleagues, who never tried to abort rheumatism, dispute this principle and say that I could not make a diagnosis of rheumatism until all of the active inflammations and exudations had formed. I, with pleasure, turn to my record of patients with definite periodicity of attack to establish this principle.

A minister who was a great meat eater, and who underwent physical, emotional and mental activity, had attacks of rheumatism to occur almost invariably from 12 to 1 o'clock in the mornings of some weeks interval. He would be aroused by headache and pains in the limb. He was armed and instructed how to prevent these attacks. Two years later he returned, saying that while he still had some rheumatic pains occasionally, he had always succeeded in aborting the acute symptoms and had never been confined to his bed a day in the two years. Again, an old woman over sixty years of age, who did active work in raising vegetables for the market, and who had eaten meat three times daily, had regular attacks of rheumatism for over two years. She was also armed and instructed, and, returning one year afterward, said she was entirely cured of rheumatism and had never had an attack that she had not aborted within twenty-four hours.

Now, let us compare these two patients. The preacher said he was often troubled with his stomach. He was away from home much of the time and could not or would not adhere to diet restrictions. The woman had no indigestion when she adhered to the rules of diet, which she afterward did, and was cured. If you will examine and question each patient who is accustomed to at-

tacks of rheumatism, you will find defects of the alimentary canal, for vague connections between intestinal disorders and joints have been recognized for years.

After writing this paper, I called on my friend, Dr. J. C. Minor of Hot Springs, who is an original thinker, for his definition of rheumatism, and it is with pleasure that I give it to you. He said:

"Rheumatism is faulty elimination from the body of natural, or diseased, or accidental waste products.

"The natural products of tissue combustion, if permitted by imperfect body sewerage to be stranded in any organ or anatomical part, may just as well be termed 'rheumatism' as when those same products are stranded in a muscle or a joint.

"One may have rheumatism of the eye, the ear, the tonsil, the appendix, or of a nerve. The waste products of disease or accident (medication), when stranded, will produce the same train of signs and symptoms as will be observed from the stranding of natural waste products. The treatment and the prophylaxis are the same for all. That is, regular and free flushing of the sewers of the body (skin, kidneys, lungs and bowels) by the regular inhibition of an abundance of water taken in at the proper hours after eating, and during the night hours."

This definition of rheumatism would reflect credit on any author, be he ever so distinguished.

We have joint infection from puerperal infections, and as I am speaking from personal experience and observation, I must give my experience of this year. I had a physician from Texas to bring his patient to Hot Springs for the baths, and sent for me in consultation and wished to turn the patient over to me for treatment. He said that the patient had violent fever a few days after confinement, followed by great involvement of every joint. I unfortunately said to him confidentially, "It must be from puerperal infection." He said, "Impossible, impossible, doctor, for I attended her myself." He at once decided to put the patient under the care of the bath house attendant, and left her. During the year I received letters from two physicians in this State, giving the same history of fever after confinement and great involvement of all the joints, and both said they would put their wives on a stretcher and bring them to the springs at once if I thought best. I advised them to come, but was so inexperienced as to say, "Puerperal infection." I never heard from either of them again. So let me beg you to be benefited by my experience and never use the word puerperal if you can avoid it.

A woman who had an attack of gonorrhea and had convinced her doctor at home that salicylic acid would not cure all cases of rheumatism, was sent here with high fever and involvement of many joints, especially of the right leg with much swelling. She was sent to one of our local physicians, who, after one or two attempts at baths, called me in consultation. I had her sent to a hospital and dilated the womb and wiped it out with iodine gauze and put in drainage, elevating the foot. The improvement was gratifying, but a week later the doctor who sent for me said, "Doctor, I believe the success in that case was from the elevation of the foot only."

I wish to report one more case from infection from pus in the pleural cavity and discuss some of the principles of the management of some of these cases. A young man had been treated for months for rheumatism of the arm, shoulder and spine. For some weeks he had been in a hospital and was given considerable salicylic acid and was sent to Hot Springs with instructions not to employ a physician, as his stomach would not tolerate medicine. Examination revealed pus in the pleural cavity and was verified by aspiration by my son, who afterward removed a rib and the patient was able to return home. So you see my interpretations of rheumatism are from defects of the alimentary canal or from pus or both, which produce infections of joints.

If it is from pus infection, the first great principle is to invade the infected region, if possible, with drainage and local applications. I have many times with women patients dilated the womb enough to wipe it with iodine gauze and put in drainage with the most gratifying results. Many times with men I have procured more perfect drainage of the urethra by the steel sound and irrigation; many times with massage of the prostate glands and local irrigations with good results. I have many times, when we have had exudations and adhesions partly or completely destroy the motion of the joint, broken up the adhesions and restored the joints to their normal functions. But let me beg you never to try it while the joints are red and hot, for you do more harm than good.

We frequently have a large increase of effusion into the joint cavity or fibrous thickening of the synovial membranes, and in

some of these cases we have a creaking sensation on movement of the joint. When we have large increase of effusions into the joint cavity it is best, after the active inflammation has subsided, to aspirate and draw some fluid, then inject the Murphy solution. While success in injecting this solution has been truly gratifying, I have several times met with great disappointment. On one occasion I drew off a pint of fluid and injected the Murphy solution at night. To my great astonishment, the next morning the joint was a great deal more distended; again I drew off more than a pint of the fluid and injected the Murphy solution, putting on a rubber bandage. The next morning there was the same great distension and the patient, seeing my disappointment, would not permit of any more operative procedures, and left two weeks afterward with the joint still greatly distended, but no damage from the injections.

One patient with ankylosis from gonorrhea of eleven months' duration, after breaking up the adhesions and the injection of the Murphy solution, the patient was able to move the joint freely afterward, and in two weeks the joint had almost returned to its normal condition.

On several occasions I have met disappointment by taking the tumefaction of the knee to be the distension of the capsules, and on aspirating and expecting to get a large amount of fluid and to inject the Murphy solution, have found the whole trouble to be out of the capsule and the injection would do but little good; but if you will put aside the great fear of dealing with the joints in a surgical way, you will put them out of the rolling chair and off the crutches to health and strength. Let me say that it is just as necessary to have a surgeon to deal with the joints as to have a surgeon to deal with an appendix.

If you aspirate or make an incision into a large joint, which is followed by rise of temperature, do not offer any uncertain hope, but assure the patient of the necessity of going into the joint in two or three places with thorough irrigation at once, and, if necessary, to put in drainage. Never put in drainage if it can be avoided. I have seen much suffering and the loss of limb because patients have been educated against surgical procedure. I have seen them hobble away to persist in vague and uncertain

treatment, that they had faithfully persisted in for more than two years, to indulge in vague and uncertain hope, all because the doctor at home suffered from an hyperesthesia of conservatism. There is much more that I would like to say, but I feel that my colleagues from Hot Springs will have something of interest to tell you on this subject.

DISCUSSION.

Dr. Hebert—A phase of the subject presented by Dr. Thompson is of importance because of its obvious relation to the therapeutics of that condition. It is now accepted as an indisputable fact that excrementitious substances are the most common etiological factors in those functional disturbances, perversions, and changes which are termed "diseases." When the production of nitrogenous bodies exceeds certain limits, or when through inactivity of the excretory channels these waste products of combustion are insufficiently eliminated, the transformation of food substances into assimilable form is hindered, the distribution of nutritive elements to the tissues is impeded, the performance of the various vital processes is disturbed, systematic stagnation ensues, and a certain degree of departure from the normal state of the economy inevitably takes place. By virtue of its alkalinity, the blood has the property of maintaining in solution various waste substances resulting from combustion, and by reason of this fact these bodies are readily conveyed through the circulatory system to the excretory channels through which they are eliminated from the economy. When, however, the alkalinity of the blood falls below the normal degree, its solvent action on the excrementitious substances is diminished, and as a consequence their transportation to the avenues of expulsion is hindered to such an extent that they are in part retained in the body and exert a varied chain of toxic influences. When, from any cause, the digestive or metabolic processes are impaired, or there is inadequate functional activity of the excretory channels, systemic retention of excrementitious substances takes place and nitrogenous toxins are generated. Whilst all the tissues of the body must needs share to some extent the hurtful action of these retained substances, the injury done by them is always greater in those structures on which their local action is chiefly spent.

Gentlemen, the subject of rheumatism as set forth by the essayist offers a very wide field for discussion, and I only offer these few remarks in support of the views held by the writer of the paper.

Dr. W. B. Welch (Fayetteville)—I dislike to disagree with my friend, Dr. Thompson, but my view is divergent from his. I think the view of medicine in this age opposes his view. I do not think rheumatism has been discussed here, or a paper read upon rheumatism. (Laughter.) The author speaks of auto-toxemias and gonorrheal joint lesions, but none of them are rheumatism. Rheumatism is an essential fever, as self-limited as is typhoid fever, *per se* and *sui generis*, and can no more be cured by active purgation than typhoid fever can.

There is no name, except "liver trouble" or "worms," probably, among the ignorant masses that, in my judgment, is more erroneously used than the term "rheumatism." Neuralgia, muscular pains, pains resulting from some disturbance of the nerve ends! Auto-toxemia, as I say, may produce pains here and pains there, but it is not rheumatism.

Then, again, it would be a very rare case indeed in which there should be any supuration in rheumatism. We do not expect supuration in rheumatism.

Again, rheumatoid arthritis—they call that rheumatism. Lumbago goes as rheumatism; gonorrheal joint lesions as rheumatism; auto-toxemias as rheumatism. Fugitive in character, transient in effect, they will yield probably with or without active treatment in a short time. But rheumatism is a disease well defined, essential in character, and usually lasts about six weeks under almost any kind of treatment; can be smothered down temporarily by salicylates, but never cured. As a general thing, in young subjects almost invariably heart lesions, endocarditis and pericarditis are looked for, expected and exist. Follow that man up and you will find him probably ten, fifteen, twenty or twenty-five years later dying of organic disease of the heart. The heart is a joint. It plays in the pericardium. The pericardium occupies the same pathological relationship to the heart as the synovial membrane to a joint. You may say it is the synovial membrane of the heart.

I want the gentleman to say what rheumatism is. He gives a Hot Springs doctor's definition of rheumatism, that is very much involved, in my opinion. Rheumatism is an essential fever caused most probably by some specific micro-organism entering the blood through its changes, and the debris that is spoken of is, of course, the result of the high temperature and the contest between the toxins and the organism. The debris is eliminated, it is true, just like it is in other fevers. It has its sequelæ just as other in-

fectious fevers have, and I simply rise for the purpose of asking the gentlemen to confine themselves to rheumatism. If they are going to discuss puerperal toxemias, gonorrheal toxemias and all that sort of thing under the name of rheumatism, why I absolutely don't understand anything about it. I do not know anything about the pathology of rheumatism. I do not know what rheumatism is. (Applause.)

Dr. Walt—It is not a question of whether we believe we know what rheumatism is. We have enough reason to understand that the physical economy is a matter of supply and demand. It is a matter of waste and repair. I was in consultation with a very busy doctor. I did not want to feed my patient. It was an acute disturbance. The doctor said that he didn't see why a child could not digest an egg; neither did I. I told the doctor that that was the very thing that I didn't want, because if digested it was carried through the blood stream throughout the system to be eliminated as waste product. If you give him a rock I know he could not digest it, and know he would not get any toxic complication from it. I merely mention that to illustrate the point that we *do* know that when we drain we get relief; we *do* know that when we eat more than we can use we have waste, and that waste necessarily means decomposition. Decomposition in the blood stream necessarily means a certain amount of nerve disturbance, and a certain amount of nerve disturbance necessarily means a certain amount of disturbance in the blood stream, which necessarily means a certain amount of waste and repair. Whether we will be able to figure out whether it is one product or another, we certainly know that it is a matter of supply and demand, and when we regulate the diet to meet the requirements, when we get the drainage to meet the requirements, then we find we have a modification of those symptoms. We understand that the blood stream is necessarily responsible for the manifestations in the form of symptoms, and then necessarily the body cell is responsible for the condition plus the feeding or taking in with the control of the blood medium.

Dr. C. T. Drennen (Hot Springs)—I do not care to discuss the paper. I have come quite a little distance to find out one thing; that is, that there is not any of us here, so far as I can ascertain at the present time, who know anything about it. We do not know what it is, and until we can classify that symptom and ascertain the various causes that produce it, we shall never be able to study the disease accurately. Just

as Dr. Welch says, we have taken in all sorts of symptoms and are perfectly content when we say that it is rheumatism. That is satisfactory. A long while ago, and even to this present day—and I am sure there are a great many men who will bear me out in this statement, that the average man who goes to a doctor is regardless as to what is the matter with him. If he has a cough, he wants something to relieve his cough. He does not know anything about the underlying condition, the pathological state that is behind it. The difficulty we have today in the treatment of the symptom lies in our failure to observe the actual primary cause of the symptom itself. We do not know whether it is Schönlein's disease, whether it is a tabetic joint, or whether it is a gonorrheal process. We do not know whether it is a malarial process in the majority of these cases. We should find out what is the matter with the man or woman. Unhappily, we are in this position today that we can't always find out. It leads us far astray. We do not know what arthritis deformans is any more than we did in the beginning, and we do not know very much more about that than we do about rheumatism.

In reference to the doctor's statement that it is a question of meats, there are practically only two foods; one is albuminoids and the other is the starch foods. Regardless of what we eat, our digestive powers are such that they either convert it into the one or the other, and we never know what is meat. All the wheat we have contains its meat. Every egg you get contains its meat. Yes, we have a diet list. I think that has given us a great deal of trouble. The little knowledge that I have gained in the treatment of so-called rheumatism has prompted me to adopt the policy of getting rid of practically all of these things in one way, and, of course, I do not get rid of them in that way. But there is a large per cent of those cases that will be benefited in that way. The majority of mankind eats too much, to begin with. It is not a question so much as to what he eats or how he eats or when he eats; but it is a question of overeating in nearly all of these conditions. We eat more by habit than we actually require to maintain life and to maintain strength and health. In the majority of all these gouty and rheumatic patients that I have seen, they do not know the difference between gout and rheumatism—not one of us knows.

I have adopted a policy like this in the majority of these cases: If the patient is

thin or if the patient is stout, I practically place him upon one meal a day, most anything that he wants if his digestion seemingly is good. In addition to that, I place that same individual on a process of water drinking. My first effort is to improve the man, if it is a possible thing, in normal or perfect digestion. If he can get perfect digestion, he is in direct line to get perfect assimilation. If he can get perfect assimilation, naturally he has got a perfect organism, provided he gets elimination. And that is the whole thing in a nutshell.

It is needless for me to suggest that if he have a gonorrheal process that we cannot remove, that you must go behind and get rid of the underlying condition. If you have a tabetic joint or a syphilitic joint, necessarily you must go after that condition; but in all of these chronic cases where I do not know anything about what it is, I have adopted the common policy of placing the man's general health in the very best possible condition and make it my business to keep after it.

Another thing I do, I give him Nature's remedy; I give him an opportunity to go out doors and move around, and live right. Remember that there is not a little flower that blooms on yon mountain-side that is not a blessing. Let him bask in the bright sunshine and commune with Nature.

Unhappily, as I said before, we do not know what rheumatism is.

Dr. Chesnutt (Hot Springs)—I was very much interested in Dr. Thompson's paper. I think his subject, "Rheumatism and Infection of Joints," covers all the joint troubles we may have. And I think all the confusion that arises in speaking of rheumatism is the fact that most physicians, where we accept the statement of the patient that he has rheumatism, merely accept the term that is used by the laity as rheumatism. That trouble would disappear if you would find a term for rheumatism. Acute inflammatory rheumatism, which, in itself, is a self-limited disease, is caused, in my opinion, as a rule, by a definite micro-organism. I rather think the portal of entry in practically all cases of acute inflammatory rheumatism is through the tonsils or some focus elsewhere in the body. When it comes to the other forms of joint infection, when you refer to gonorrheal rheumatism, it ought not be referred to as such. It ought to be referred to as gonorrheal arthritis. If you do that, then there is no difficulty. You know whereof you speak. And the mode of treatment is different entirely. Suppose a man comes to you who gives a history suggestive of acute

inflammatory rheumatism in the beginning, and you find on examination of his urethra or prostate that he still has gonococci there. If you treat that as acute inflammatory rheumatism, you will never get any results. But if you attempt to remove the local foci of the infection, the joint trouble, unless it has persisted for a long time, will immediately clear up.

Dr. Hynes—There are one or two points I want to make. I did not hear all of the paper, but enough to get an inkling of it. We, as examiners for applicants for life insurance, are met frequently with affirmative answer by the applicant when he is asked the question, "Have you had rheumatism?" I stop and caution such a man, and ask him again, "How do you know you have had rheumatism? Do you know you have had rheumatism? Was your case pronounced rheumatism by your doctor?" He says, "I had pains in my arms, and sometimes I have a pain down here" (demonstrating). I say, "That is not rheumatism. Rheumatism is an acute infectious disease, affecting the joints. Acute inflammatory rheumatism is the only proper rheumatism. These others are something like rheumatism; near-rheumatism. We have only one rheumatism. Muscular rheumatism is a misnomer. It might be called myalgia. That's a good name. It is simple and covers the case.

If I might digress a little, I might say this: That when you have a man with the belly-ache and label it appendicitis, you shut that man out from life insurance for life perhaps, and perhaps for a good many years. You are doing him a direct wrong. When you label a man with rheumatism who hasn't it, you are doing him a direct wrong. You are doing him a wrong that his family may suffer from. I think I make a very important point when I bring this to you, and I hope to impress it upon you.

In regard to rheumatism, I believe thoroughly that Dr. Welch is more than correct when he says that we do not know what rheumatism is.

I am reminded of a little story that my preceptor told me of an Irish patient he had in Cleveland, O. He had the fashionable idea in regard to rheumatism. He believed that it must come and go like fads or fashions in women's hats. He had the fashionable idea that rheumatism was caused by acid in the blood. He did not know what acid, but it was from acid in the blood. The doctor had seen his patient two or three times and had prescribed for him such remedies as would relieve his system of its overplus. Now, he prepared for him a saturated

solution of bicarb. soda, which the patient took as directed. The man came to his office in the course of a few days and said, "Doctor, how much was that last bottle of medicine?" "Your bill is eight dollars and a half," replied the doctor. "I don't want to pay a cent for any of your visits—not a single cent—but I am willing to pay you for that bottle of medicine, and would not mind taking another at the same price."

Dr. Spillers—This is a very interesting paper, and I enjoyed it very much. It reminds me of a story I heard from Dr. Ed Dibrell of Little Rock in 1905, lecturing on rheumatism. He came in to his class one morning and leaned over and touched a young student and said, "Can you tell me the cause of rheumatism?" "Doctor, I did know, but I have forgotten," he replied. Dr. Dibrell pulled his handkerchief out in his characteristic way and said, "That's too bad. The only man on earth who ever knew the cause of rheumatism has forgotten it."

Dr. William Krauss (Memphis)—I don't know whether to be thankful for being called upon to discuss a subject that is so nebulous. The fact is that whenever we are discussing questions of definition and questions of classification, it becomes a matter of opinion as to what group of symptoms or what symptom-complex we are going to admit under our definition. Now, so long as we are dealing with an acute febrile metastatic polyarthrititis with so-called sweat, we are dealing with a symptom-complex that we all understand. The uric acid feature of this syndrome is that we have a scant, high-colored urine loaded with uric acid and urates, which are, however, not the cause of the rheumatism, but are the result of tissue destruction. This rheumatism terminates by lysis in the course of days or weeks and is probably caused by the diplococcus of Poynton and Payne, which, however, may be only a strain of the streptococcus pyogenes. At any rate, there is an infectious micrococcus finding its portal of entry very frequently in the tonsils, and nearly always attacks the valves of the heart. Here we are dealing with something in the concrete which cannot be confounded with the toxin of infections, with gout or with chronic anthrititis. It is usually confined to the joint in which it appears for the time being, but leaving it definitely and absolutely without any trace of pathology, and invading another joint in precisely the same way, putting it in a condition that would lead you to suppose that nothing but a complete destruction of all the tissues of the joint were possible, and yet you would find to your amazement that

in a day or two there was apparently nothing whatever the matter with it, but still another joint is now in the same condition. Now, when we come to the variations of this infection, we are leaving "rheumatism" as such entirely behind, e. g., "growing pains," pleurisy, peliosis, etc.

When we come to deal with arthritis in general, especially toxic arthritis, we have two things to contend with. They are the toxic arthritis due to the absorption of toxins from some specific or definite infection, or the toxic arthritis due to the absorption of vicious metabolic products or the products of decomposition in the intestinal tract and which act as a foreign body, act as an irritant upon the nerve filaments and cause pain. As far as arthritis *per se* is concerned, we ought to keep clearly in mind that we have here a definite anatomical structure subject to definite pathological changes.

A joint is not merely the space between the joint surfaces; it is not simply the synovial membrane; it is not simply the perisynovial connective tissue or the fibrous capsule of the joint, nor the cartilage nor the bone. The inflammatory agent may selectively attack any of these in varying degrees and give you symptoms and changes in accordance. Primarily, of course, such an infection or intoxication is not in the endothelial lining of the joint; on the contrary, this is the last tissue to be reached by the process. From the viewpoint of histogenesis, I think it wrong and unpardonable treatment to drain a joint, or open it, or admit air into any cavity that is lined by endothelium, because you immediately or soon thereafter destroy its endothelial function, and it ceases to be endothelium and becomes surface epithelium, and you will have adhesions and ankylosis.

Dr. Thompson—I want to thank Dr. Welch for his speech. I told you that it was with hesitancy that I ventured to speak on this subject, and that there is nothing more true than the doctors are slaves to their former teachings. It is hard for us to advance and get away from our early impressions; and I take no exception to the doctor's opinion, because he has gathered around him that opinion for years, and weighed it and turned it in his mind until it is a religion that he has established. I did say, and have said on many occasions, that we might as well dispense with the word "rheumatism." Rheumatism is only a matter of individual opinion. And today I stepped out upon that broad field and declared that it is from no special cause, or special disease. I would be glad to hear the profession ac-

cept it, and would define what we now call acute rheumatism to be a toxemia from the alimentary canal.

I was speaking on infection of joints, and alluded to puerperal infection and those things as an infection. So, if you ask me to make a definition of rheumatism, I say that it is a fever resulting from the by-products of an abnormal digestion.

My friend, Dr. Collings, was here yesterday and was to discuss this subject, and he holds the same idea I have in regard to what I call acute rheumatism. Dr. Collings says: "Rheumatism is a toxemia due to the absorption from the intestinal tract of the poisonous products of faultily digested and decaying proteids." What the doctor calls rheumatism that runs six weeks is simply a toxemia from the alimentary canal.

It is hard for doctors to get away from their former teachings. Here is my friend, Dr. Krauss, who says, "Never open a joint if you can help it." I would ask him, how many joints has he opened? I would ask him, what is his experience?

Dr. Krauss—I have seen a great many opened, and they have regretted it very much.

Dr. Thompson—The fact that you opened them up and regretted it is due to the fact that you are not thoroughly convinced in your opinion, and if you open a joint and find it infected, then you haven't the temerity to say to him, "I haven't operated enough. I must more thoroughly drain. I must more thoroughly wash." There is nothing more unfortunate than for the surgeon to open up a joint for a doctor, and tell him, "Let me hear from you," and about two weeks afterward the man has had high temperature for two or three weeks, running to 104 or 105, and he sends for the surgeon and says, "That joint is worse because you operated upon it." If he had been notified earlier and would have operated at once, or as soon as the fever occurred, and washed it thoroughly, I pledge you my word that the temperature would have fallen in twenty-four hours.

I say that the great fault is in not thoroughly convincing yourself. Never let a man go off with that defective joint, with the probability of other troubles developing, and which will probably cost him his life.

COMMOTIO CEREBRI, CONTUSION.*

By Jos. B. Wharton, M. D.,
El Dorado.

Before discussing this condition I desire to present for the purposes of better illustration, a case which occurred in my practice during the past summer:

HISTORY OF THE CASE.

Mr. A. L. P., locomotive engineer on Louisiana Division, C., R. I. & P., was about June 1 sent out over the line to learn the road again, having been absent from his regular run for some time. He was sent to Winnfield, La., with orders to return on the fast train to El Dorado. As his train arrived in Winnfield the through freight was ready to pull out and he was forced to board it about six or seven cars back from the engine. He got hold of the car, climbed on top and rode on it a distance of a few miles out on the main line. The train being a fast train, did not stop until it had gone a distance of ninety miles from Winnfield. At that stop his hand-grip was found on the car he had boarded, and news of his having been lost was wired back to Winnfield. Another train coming in the same direction picked him up in a ravine some twenty or thirty feet deep. He was taken to the next station and turned over to a local physician, no company surgeon being at the place. This patient had laid out in the ravine in a cold, rainy night, without any attention. On the following day his wife and myself were notified as to his condition, and at her request I met the train bringing him home. On the road I was joined by Dr. S. L. White of Ruston, La.

The patient was in the baggage car, completely unconscious, nauseated and vomiting, nausea continuing for ten or twelve hours longer. His pupils were contracted, did react to the light, and to accommodation.

*Read at the ninth annual meeting of the Surgical Association of Rock Island Lines, Colfax, Iowa, September 13, 14, 1911.

He could not be aroused for several hours and we could not get him to swallow satisfactorily. The right eye was swollen and completely filled the socket and was more or less black. There was also a swelling and puffiness of the scalp above the right fissure of Rolando, and severe lacerated contusions about the face and neck, he having landed in his fall in some briar thickets and small shrubs. There was paralysis of the left arm and leg. Further examination revealed severe contusion over the left iliac spine, also swelling of the elbows and lacerations of the skin.

The pulse was slow and of high tension, respirations were irregular and stertorous, face suffused, abdomen hard and distended, patient could not be aroused from stupor.

The sensory reflexes were abolished, there were muscular twitchings involving the left side. The patient lay on his left side, with his limbs flexed; he would persistently resume that position after changing him.

We succeeded in getting him home that evening at 7:30 and placed him in charge of a trained nurse. There was retention of urine and I had to resort to catheterization. About two ounces of urine was obtained from his bladder. Since the amount of urine was small, and since there was incontinence, we decided that there was suppression of the secretions. The pulse was irregular, the heart action depressed and respiration was superficial and irregular.

Being alarmed at his condition, I called Dr. Purifoy, surgeon for the Missouri Pacific, into consultation. After he had examined the patient we concluded that he was suffering from concussion of the brain, with a probable contusion and laceration of the cerebral cortex. He had been given several hypodermics of morphin and atropin previous to our seeing him. At this time he was perspiring freely, circulation was poor and we prescribed another hypodermic of morphin and atropin and normal salt solution by proctoclysis. The patient reacted in about two hours. Since there was more or less paralysis of the intestines, his abdomen was hard and greatly distended with gas. We gave him some calomel, soda and strychnin, administering twenty grains of calomel in the course of the night, followed with a pint of citrate of magnesia in the morning. We placed an ice cap on his head. On the following day his bowels be-

gan acting, and with a relief of the intestinal toxemia all secretions became active. He was able to void his urine freely. His temperature on the second day in the afternoon was 101; he became very restless and vomiting was persistent. We controlled the vomiting by the administration of carbolic acid and peppermint water, and continued the ice bag on his head. The intestinal paralysis continued. He was given ten-grain doses of iodid and potassium bromid to insure rest. Also a hypodermic of 1-40 grain of strychnin every four hours. The only nourishment given was orangeade. He became more nervous and restless, and it was necessary to increase the amount of potassium bromid administered and it required twenty-grain doses of that drug to quiet him.

The stupor continued until the fifth day, when he began to recognize his family and surroundings. At that time also a paralysis set in the left arm and leg. He talked a great deal irrationally, made frequent attempts to get out of the room, leap out of the window, etc. He was endowed with supernatural strength. Besides the nurse, it required the assistance of four able-bodied men to pacify him. As this condition gradually became worse, we decided to take him to the hospital, and on the following day, the seventh day from his injury, we brought him to Little Rock. It became necessary to resort to the administration of opiates to quiet him sufficiently. He became quite troublesome in the ambulance trip to the hospital.

After his arrival, Dr. J. P. Runyan, division surgeon, took him under his care and confined him to a private room, permitting his wife and brother to remain with him in order better to control him. Dr. Runyan agreed as to diagnosis, and observed him closely for a few days as to evidence of compression. He administered hyoscin hydrobromid to induce rest and quiet.

He remained irrational about two weeks more, when one day he claims he suddenly awoke and asked his wife what had happened to him and how he came to be in the hospital. While his mental condition improved, it was not entirely normal up to August 5. He complained all this time of a great deal of pain in his left side and hip, radiating up toward the ribs. Movement in the left leg is impaired to a certain

extent yet. He was discharged from the hospital on the last day of July and came to see me on August 1. He complains of pain in the left side; the left foot is a little ataxic, which is more noticeable when he goes up and down stairs. He complains of headache, has a badly-coated tongue and faulty elimination. I placed him on strychnin and advised him to keep his bowels open. He went to his father's home in the country to convalesce.

* * *

By the term "concussion of the brain" we designate a condition which follows generalized injuries to the head, in which no recognizable lesion of the brain is discoverable, but which presents symptoms of temporary impairment or abolition of the functions of the brain as a whole. These symptoms generally appear at once on receipt of a blow or fall on the head. The patient suddenly becomes unconscious, he is stunned, falls inanimate. The unconsciousness may be momentary or prolonged, as it was in this instance. In mild cases recovery begins at once; or the patient regains consciousness, but is giddy, weak, has headache, is dull and confused some minutes or hours. The occurrence, as shown in this case, immediately preceding the accident and the accident itself is forgotten. He could give no intelligible account of himself after having boarded the car on the fast freight.

In more severe cases unconsciousness lasts for minutes or hours; shock, as in this case, is more pronounced, surface pale, pulse low, fever, respiration irregular, superficial and stertorous. The conjunctiva is insensitive and normally painful; irritations of the skin produce no reaction; the pupils are equally normal, contracted or dilated, but responsive to light; repeated vomiting, as in this case, is common. There may be convulsive twitching of the limbs. Recovery, as a rule, is gradual; headache, mental confusion, muscular ataxia, retention of urine and feces may be present. For a time the patient may be wholly or partly aphasic. The symptoms gradually pass away after hours or days. During recovery the patient generally lies in bed on his side in a position of general flexion, semi-comatose; he is irritable and does not wish to be disturbed. During this time the face may be flushed, the eyes bright and suffused. There is a rapid and high

tension pulse, and the sooner or more complete return to consciousness, the more probable it is that the condition is merely one of cerebral shock.

When unconsciousness, however, as in this case, is prolonged for weeks, diagnosis of cerebral concussion alone cannot be made. It is probable that contusion or laceration of the brain of greater or less severity is present. In this case there was very probably some contusion attended by slight hemorrhage in the neighborhood of the fissure of Rolando on the right side where the motor and sensory centers for the arm and lower limbs are situated. This would account for the paralysis on the left side. As already described, the patient showed external evidences of a slight puffiness and swelling of the scalp on the right side over the fissure of Rolando. The irritative motor symptoms together with the mental disturbances are accounted for by the irritative brain lesion. The gradual absorption of the hemorrhagic exudate ushered in the return to consciousness. The slight paresis present and the pains complained of are due to the sclerotic process following the injury.

The subject of greatest interest in connection with this case is probably the prognosis, but time is too short to state whether recovery will be complete or whether permanent functional disturbance due to the sclerotic process or hysterical conditions will develop.

The condition of the patient at the present is one of gradual improvement. There still remains a slight paresis of the left lower limb, no muscular wasting is apparent, complains of fleeting pains on left side of head. He is resting well, but complains of trouble about going to sleep. He believes that he is entitled to damages. Whether traumatic neurosis due to minute pathologic changes of the delicate nervous structure or due to hysteria, will develop, time alone will tell.

EXTRA-UTERINE PREGNANCY.*

By Jas. A. Foltz, M. D.,
Fort Smith.

I have selected this subject because of a very recent experience of mine which im-

*Read at the annual meeting of the surgeons of the Frisco Railroad, at St. Louis, August, 1911.

pressed very strongly on my mind the importance of an early recognition of this condition and the necessity of a thorough and painstaking examination of all cases. It also showed me how it was possible to be misled and deceived even after having made a thorough and careful examination.

Ectopic gestation, or extra-uterine pregnancy, is by no means as rare as is commonly supposed, nor is it of recent recognition. The first case described was probably that of the Arabian physician, Albucasis, early in the eleventh century. Derlewang, in 1547, reported a case of a woman who had been delivered several times by operation for the removal of the fetus by the abdominal route.

The classification of extra-uterine gestation made by Biancete, in 1741, is the one that is recognized and used today. That is, we have three distinct classifications:

1. Ovarian pregnancy, wherein the fecundated ovum remains in the Graafian follicle and is there developed. This form occurs in about 4.8 per cent of cases and is the rarest form encountered.

2. Abdominal or peritoneal pregnancy, wherein the fertile ovum locates itself in the abdominal cavity. This condition occurs in about 8.5 per cent of the cases. This condition of abdominal or peritoneal pregnancy is sometimes divided into two classes:

- (a) Primary abdominal pregnancy, where the ovum falls into Douglas's cul-de-sac and stays fixed there from the beginning;

- (b) Secondary abdominal pregnancy, in which the ovum develops first in the tube or ovary, and later falls into the peritoneal cavity, where it develops;

3. Tubal pregnancy, wherein the fertile ovum is wedged in the tube, this form being by far the most frequently encountered, occurring in about 86.7 per cent of cases.

Now, while of course it is interesting from a pathological standpoint and from the standpoint of accuracy to know these various classes, and while it would be a thing much to be desired to be able to diagnose the one form from the other prior to operation, and while I know that some men claim they can make this refinement in diagnosis, I think the cases are very rare where this is done exactly. From a practical stand-

point, and for the patient's life, the important thing is to diagnose some form of extra-uterine pregnancy at the very earliest possible moment, and having once diagnosed it, to operate before rupture takes place. While this may sometimes be done without very much trouble, as a rule it is a very difficult diagnosis to make, and usually is not made until after rupture has taken place, and even then in many instances is not made until after the patient is beyond hope from surgical intervention.

The chief reason that so few of these cases are diagnosed prior to rupture is due to the fact that there is practically no symptomatology. As a rule there is nothing which would suggest to the patient that anything was wrong other than ordinary pregnancy, and consequently it is only when the sharp pains, the collapse and the pallor take place that the doctor is called.

As to the symptomatology of rupture you are familiar with. The agonizing pain radiating over the abdomen, which becomes swollen and sensitive to the touch, and which on examination shows that peculiar doughy feel of an abdomen full of blood, the pale face, the rapid pulse, the air hunger, the yawning, the subnormal temperature, constitute a general picture of collapse unnecessary to be dilated upon. But the point I wish to make in this very brief paper—and if I shall succeed in making this point the paper will have served its purpose—is to bring out the fact that you frequently do not have this classic set of symptoms in ruptured tubal pregnancy. As an illustration of this point I submit herewith, somewhat in detail, the following case:

Mrs. P.; age 23; widow; divorced. Was called early in the morning. Found patient suffering severe pain in abdomen, which was greatly swollen, very tympanitic, but not doughy to the touch. The temperature was 102, pulse 146, and respiration 38. She gave a history of having missed two menstrual periods, when, one week prior to my visit (and this is the interesting part of this case), she had consulted a quack of our city whom I know to be an abortionist. She stated he had "examined her and did something," and gave her some medicine and told her she would be all right. After she left this charlatan's office she went to see a lady friend, and together they went to a drug store and ate some ice cream. After she had eaten the cream, and while still on the stool in the drug store, she became suddenly very sick, was seized with a severe pain in the abdomen, which was attributed to the cream, and fainted. She was placed in a hack and driven home, when the doctor in question was sent for. Shortly after this she had what she termed a very slight hemorrhage, and passed a few clots or blood from the vagina.

I was impressed with the fact that this woman was attempting to give me just as little information as possible, and, in my judgment, was attempting to protect the quack, as women will almost invariably do under circumstances of this kind.

Upon examination at the hospital to which I had her transferred immediately, though, by the way, I did not suspect ruptured tubal pregnancy, and this was five days after she had fainted at the drug store and had the hemorrhage and passed the clots from the vagina. The examination revealed a bulging over Douglas' cul-de-sac. She was extremely tender, and the examination was very painful. My first diagnosis was that she had pelvic cellulitis, and probably a general peritonitis following the introduction of a dirty catheter on the part of the abortionist, and which had done its work by producing the desired abortion, which had been followed by an infection. That evening, however, when I made my rounds at the hospital and examined this patient, I was immediately struck with the fact that she had undoubtedly had a severe hemorrhage and lost a large quantity of blood since I had seen her that morning, but the nurse assured me that the pad the patient had worn was not even soiled.

I immediately saw my mistake and realized that this woman had had a ruptured tubal pregnancy.

At this time she was almost pulseless; her feet, hands, nose and ears were cold; her lips were bloodless, and she was in a condition of profound shock.

Without delay I hastily summoned a couple of assistants and rushed her to the operating room, and, with practically no anesthetic, opened the abdomen by quick and free incision in median line, going directly through the peritoneum. Great clots of blood rolled out over the abdomen, and, upon scooping out the remaining clots, the ovarian artery was found open and bleeding, which was quickly caught and tied, and the ovary and sack and tube removed without delay. It was impossible for me to locate the fetus, though I secured the placenta.

She was sewed up as quickly as possible; was still breathing faintly, though pulseless when she left the table. She was put between hot blankets, surrounded by hot water bottles, and enteroclysis with normal salt solution begun. She had taken nearly a pint of normal salt solution, to which had been added a dram of adrenal chlorid, while we were preparing for and doing the operation.

During the first twenty-four hours this patient retained and eventually absorbed twenty-two pints of normal salt solution. The pulse made its appearance about two hours after the operation, and her improvement from then on, though slow, was uninterrupted. She left the hospital in three weeks, a wiser, and I believe a better woman.

The interesting thing in this case was the manner in which I was deceived by the history of the case and by my jumping to a conclusion that nearly caused me to make a fatal mistake.

Sexual Education by the Family, by Science by Morality and by Hygiene.—J. A. Doleris (*La Gym.*, November, 1910) thinks that sexual education will lead young people toward a higher goal, show them early the true significance of life, guide them to a sufficient knowledge of human biology, and inculcate a logical conception of the laws of nature which rule our lives. It is time to put an end to the ignorance and mystery of sexual matters derived

from religious dogmas, which has been thrown around the highest and most essential function of life, reproduction. The austere morality of religion has accomplished little. There is no desire to lessen the dominance of true love in marriage by education, but to give a true appreciation of the physical and psychical qualities necessary to produce healthy and strong offspring; to substitute this for an idealized romantic sentiment, or a materialistic satisfaction of the sensual element. We must break with a system of education whose worst consequence is to give a false judgment to children, to pervert their imagination, and sometimes even to incite them to vice. The education of the child should begin when he asks the first questions about the differences between the sexes, and the phenomena of generation. It must begin with the parents, but they must first receive instructions which shall enable them to teach the child aright, and make the knowledge correct and natural. To begin the sexual education at sixteen years of age is too late. Science alone is competent to begin this instruction; teachers must first be taught. For girls, women physicians who are also mothers make the best teachers. Girls are more precocious and more curious than boys in their thoughts about motherhood. They are more apt to ask questions and will not be satisfied with foolish answers. There is no such thing as a natural chastity; the self-control of the young girl is the product of moral heredity and early education in prudence. Educators must receive scientific instruction in sexual matters to fit them for their instruction of children. The program should include natural sciences, morality, hygiene and pathology. The subject of reproduction must become to the child natural, simple and moral. Ideas derived from zoology, biology and botany will aid him in comprehending process. The occurrences of sexual life in flowers, chickens and the domestic animals should be taught him in a refined manner. They make it possible for him to comprehend what happens in the human race. As every flower requires fertilization, the idea will become usual to him that the same process is necessary for the human race. The gradual transition of ideas will not shock or offend, but rather interest his mind. With the coming of puberty he must be taught by lessons in physiology and anatomy to control his sexual instincts. The young girl must be taught how to choose a husband, what are the conditions of a healthy and happy marriage, the nature of gestation, and parturition, and the nourishment and physical education of the child. It must be taught that the function of the genital organs must always have an object—procreation—and that they are to be used in no other way. As control is taught the child for hunger, thirst, pain, so control of the sexual instincts is to be taught. The assistance of exercise, manual labor, games and sports in gaining this control must be learned. Abstinence from alcohol, moderation in the sexual life, unstimulating diet must all be shown to be of benefit. Continence must be inculcated in the young up to a certain age. They must be taught that science and natural laws justify this continence, and that indulgence is not necessary to health. Suitable books should be given to the young on these subjects; the authority of the physician should be exercised; conferences with his teachers, in schools for adults, in professional schools, in the army, etc., may all aid in this work. Such an education will ennoble love and the life of the family, it will render it more and more happy.—*American Journal of Obstetrics.*

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All communications to this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the State. Notice of deaths, removals from the State, changes of location, etc., are requested.

ADVERTISING RATES.

A schedule of rates will be furnished upon request.

CHANGE OF ADDRESS.

Change of address will be made if the old as well as the new address be given.

ANONYMOUS COMMUNICATIONS.

No anonymous communications will appear in the columns of this Journal, no matter how meritorious they may be.

NOTICE.

All changes of address should be sent to Dr. C. P. Meriwether, secretary of the State Society, as he furnishes the mailing list each month of our members. All communications for publication should be sent to the editor not later than the 5th of each month.

Editorials.

THE HOT SPRINGS MEETING.

The thirty-fifth annual session of the Arkansas Medical Society has been called to meet in Hot Springs on Monday, Tuesday, Wednesday and Thursday, May 13, 14, 15 and 16. The meeting will be held under the auspices of the Hot Spring-Garland County Medical Society, and, from advanced reports received, the meeting promises to eclipse in scientific interest and attendance any previous session.

Secretary Meriwether has recently been in conference with Drs. Laws and Martin, and Drs. Steer, Proctor and Wood of the Committees on Program and Arrangements, respectively, and advises that not only has the program—scientific and social—been blocked out, but that most of the details have already been agreed upon. This early

arrangement of the program insures a successful meeting, and the committees are to be congratulated upon their foresight.

The following is only a preliminary program, and is subject to change before April 1:

PRELIMINARY PROGRAM.

Place of Meeting—Hot Springs.

Date—Monday, Tuesday, Wednesday and Thursday, May 13, 14, 15 and 16.

Headquarters—(Not yet selected.)

MONDAY MORNING, MAY 13—9 O'CLOCK.

1. Registration of delegates.
2. Meeting of the House of Delegates. (The entire day will be devoted to the transaction of business by the House of Delegates.)

TUESDAY MORNING, MAY 14—9 O'CLOCK.

1. General meeting.
2. Addresses of welcome and responses.
3. Introduction of and addresses by fraternal delegates and distinguished visitors.
4. President's annual address.

TUESDAY AFTERNOON—2 O'CLOCK.

Sectional Meetings.

1. Section on Dermatology—W. R. Bathurst, Little Rock, chairman. Three papers and discussions.
2. Section on Pathology—Chairman. Three papers and discussions.
3. Section on Diseases of Children—Wm. Crutcher, Pine Bluff, chairman. Three papers and discussion.

TUESDAY EVENING—8:10 O'CLOCK.

Public meeting held under the auspices of the Section on Public Health, Wm. Deadrick, chairman.

Symposium on hookworm disease. (Pathologic exhibits and stereoptican views.)

10 TO 12—ALUMNI REUNIONS.

1. Tulane.
2. University of Arkansas.
3. College of Physicians and Surgeons.

WEDNESDAY MORNING, MAY 15—9 O'CLOCK.

1. Section on Surgery—Chairman. Eight papers and discussions.
2. Section on Practice—Chairman. Thirteen papers and discussion.

WEDNESDAY EVENING, MAY 15—9 O'CLOCK.

Annual Ball—Arlington Hotel.

THURSDAY MORNING, MAY 16—9 O'CLOCK.

Section on Obstetrics and Gynecology—Chairman.

Eight papers and discussion.

THURSDAY AFTERNOON, MAY 16—2 O'CLOCK.

Joint session of the Arkansas Medical Society and the Arkansas State Pharmaceutical Society.

Two papers and discussion.

Last meeting of the general sessions.

Election of officers.

Adjournment sine die.

THURSDAY EVENING, MAY 16—9 O'CLOCK.

Annual Banquet—Arlington Hotel.

DR. MORGAN SMITH RESIGNS.

Dr. Morgan Smith has resigned as State Director of Rural Sanitation, a position created for the State Board of Health by the Rockefeller Sanitary Commission for the Eradication of Hookworm Disease, and Dr. C. W. Garrison of Fort Smith has been appointed to fill the vacancy.

Dr. Garrison is a graduate of the Memphis Hospital Medical College, and until engaging in the service of the State Board was actively engaged in practice at Fort Smith, where he enjoyed a splendid practice.

Dr. Garrison possesses all the qualifications necessary to make a success of the new work which he has undertaken, and the Journal wishes him the greatest measure of success. Dr. Garrison has moved his family to Little Rock and will conduct his work from the office of the State Board of Health, room 514 State Bank Building.

Dr. Smith, secretary of the State Board of Health, under whose auspices the campaign for the eradication of hookworm disease in Arkansas is waged, will remain in close touch with the work and will use all means at the command of the Board to assist Dr. Garrison as Director.

A WEAK SPOT DISCOVERED.

In a recent decision the Arkansas Supreme Court holds that the practice of chiropractics is not the practice of medicine within the meaning of the statutes, therefore, a lower court was reversed in a case in which a chiropractic was indicted and fined for a supposed violation of the medical practice act.

It is indeed most unfortunate that this weak spot has been discovered in our medical practice act, but it is safe to predict that the legislature which meets next January will promptly remedy the defect. The Committee on Public Health and Legislation of the State Society has already taken cognizance of this decision and will prepare an amendment, which, when passed by the General Assembly, will forever and forever estop the medical outlaw from pillaging the people.

Department of Medical Jurisprudence.

CONTRACT BETWEEN PHYSICIAN AND PATIENT—PHYSICIAN'S OBLIGATION.

By Hon. R. L. Floyd, of the Little Rock Bar.

When one, after having acquired the legal right to practice medicine in any locality, opens an office and puts up his sign, thus holding himself out to the public as a practicing physician, he has not by any or all of these acts put himself under any legal obligation to anyone.

He is not like the railroad or telephone companies, or the ferry-keeper, who must render the service they have to offer to everyone without discrimination who complies with reasonable general requirements, but he may for any reason or purely arbitrarily refuse to answer any or all calls for his service, no matter how urgent the need or how impossible to secure the attendance of another physician. No legal liability or responsibility attaches in the slightest degree until he accepts the employment.

But when a call is accepted, though nothing with reference to it has been agreed upon, the law says that a contract has been entered into by the parties and undertakes to say what that contract is.

On his part the physician undertakes that he is possessed "of that degree of learning and skill which is ordinarily possessed by members of his profession" in similar localities. The last qualification is not sanctioned by all the authorities, but seems to be supported by the greater weight of them. It simply means that that degree of skill and knowledge is not demanded of a practitioner in a remote rural district devoid of many

of the facilities for study, observation, experience and consultation, and in a community without the capacity or inclination to adequately recompense such services, as is required of physicians in more favored situations. He also undertakes that he has kept up with the general advancement of learning in his profession to the extent of the average in it in his locality, at least.

If he does not possess the requisite degree of knowledge and skill, and injury results thereby, he is liable in damages to the extent of the injury.

Having the knowledge and skill required, he further "undertakes to use reasonable care and diligence and his best judgment in the treatment and application of such knowledge and skill in the (diagnosis and) treatment of the case." The words in parenthesis are inserted by the writer to make the statement of the principle in accord with other authorities and the undoubted meaning of the court in the quotation.

From this it follows that he does not contract to effect a cure nor to make an infallible diagnosis. He is not liable for the result of a wrong diagnosis or treatment unless he failed to use reasonable care in the application of his knowledge and skill.

He is bound to exercise the greatest of good faith in his relations to his patient. The concealment of the nature of the patient's malady and its course and the nature of his treatment of it might well be a serious element of danger in case of sudden death or other grave consequences that might have been avoided by frankness on the part of the attending physician. For instance, the failure to notify as to the gravity of a patient's condition in time for those in immediate charge to notify more distant relations in time to attend the bedside before death, would probably make a physician liable on the same principles that a telegraph company is for failing to deliver a message of like import. The physician withholds such information at his peril.

The physician is not liable for the injurious results of his treatment that could not have been reasonably anticipated by him. "When a skillful and careful surgeon exercises his best judgment in a case of doubt he cannot be held liable for a want of success."

He further undertakes to visit the patient with such frequency as the nature of the

case requires until he is dismissed or withdraws from the case. If he takes a case knowing he cannot give it proper attention he is liable for the resulting injury. If his failure to visit a patient for an excessive interval is due to unforeseen contingencies in the nature of emergencies, he is not liable, but it is his duty to apprise the patient of such conditions where reasonably possible so as to give him the opportunity to procure another attendant.

The physician is, generally speaking, the judge of the necessary frequency of his visits.

While the physician can arbitrarily refuse to accept a case, he cannot withdraw without reasonable notice, which is to be determined by the circumstances surrounding the case. On the other hand, while the patient cannot arbitrarily command the physician's services, as was formerly the case, he can dismiss him at any time for any or no cause.

The physician further undertakes to follow the established practice of the school of medicine of which he is a professed adherent, so far as there is one, in attending a case. The exercise of his judgment is controlled by this rule. He experiments at his peril. It is open to grave doubt if the consent of the patient or his family would protect the physician in any considerable deviation from the recognized practice of his school from a judgment in damages for an unfortunate termination of the experiment.

The physician undertakes that he will use all proper safeguards against conveying disease or other infection to his patient from other patients, or by improper care of apparatus or instruments or his person.

He also undertakes to give proper and adequate instruction to those who have the care of the patient in his absence to provide for all conditions or contingencies that may be reasonably anticipated.

The earlier cases held that his contract also included the provision of proper medicine, but it is not likely that the courts would follow that rule now, except in cases arising in remote rural communities where primitive conditions and customs still prevail. When competent pharmacists are actively engaged in their business in the community it is not likely that the courts would hold that the supplying of medicines is part of the doctor's contract, though there does

not appear to be a modern case on that point.

Where a physician accepts a call to a charity patient he is bound by all the rules that obtain in other cases, and cannot withdraw from it except upon reasonable notice.

The obligations of the patient and the termination of the contract will be discussed in the next issue.

Editorial Clippings.

PSEUDO-SCIENCE.

Science, says Plato, consists not in passive perceptions, but in reasoning about them; and the pseudo-scientists, medical, extra-medical and anti-medical, who are actively engaged in foisting therapeutic frauds upon the credulous public, will do well to bear this in mind.

The first essential to the scientific method is observation, and the second is deduction. No man worthy of the name scientist would apply to a whole species conclusions drawn from observing the idiosyncrasies of a single member of the species. Yet how many impositions of today rest upon conclusions which will admit of no demonstration whatsoever. Christian Science, which is neither science nor Christianity, osteopathy with its fantastic pathology, its nonsensical therapeutics, and New Thought with ideas which have been the common property of the feeble-minded in all ages, are, measured by scientific standards, not science at all.

Christian Science, that greatest of all present-day pseudo-scientific systems, contains not a single basic principle which will admit of a scientific demonstration. Yet a visit to one of the services will show how large a number of otherwise reasonable people accept the unproven and unprovable tenets of "Science and Health, with a Key to the Scriptures." This newly discovered key is probably like the one described in Paine's biography. "We have" said a fanatic to Paine, "discovered the key to the Scriptures which has been lost for two thousand years." "In that event," replied the doubting Thomas, "it must be very rusty by this time."

Based on a revamped, a refurbished and a rejuvenated pagan theology whose every premise can be disproved, this pseudo-scientific theological system has gone from victory unto victory, until it numbers votaries in every civilized country of the globe. We

deny that it advances because of its therapeutic merits, for the very good reason that it has none.

Osteopathy, a pseudo-science, with its unprovable theory of tissue dislocations, and their restoration by manipulation, is not quite as bad as Eddyism, for all physicians will admit that active manipulation is at times a good thing. There are one or two good things in osteopathic practice of which physicians may avail themselves, but the amusing egotism of the osteopathic practitioners we hope will not be borrowed. The condition of body and of mind which led to the passing of a motion to challenge regulars to test the merits of the two therapeutic systems, is better imagined than described in these columns.

The writer knows of six cases treated by osteopaths, not one of which received any benefit. The osteopathic question was gone over some time ago in the columns of this paper, and a more extended review will be found there. Osteopathy is a pseudo-science, quite as much so as solar biology, astrology or demonology.

The New Thought cult numbers many votaries, and is feeling its way into therapeutics. New Thought deals much with the influence of the spirit; then there is a certain elevated intellectual tone to this cult which attracts many converts. Their literary output is best described by the term pseudo-intellectual rubbish. It is the assumed air of intellectuality which is responsible for the growth of the cult.

In the medical profession itself there is a scattering of disgruntled obstructionists, ancestor-worshipers and eccentric non-descripts in general who father all sorts of pseudo-scientific rubbish. Anti-vaccinationists, anti-antitoxinists, anti-infectionists, hydro-pathists, mechanists, magnetists, and so on. These renegades are in truth New Thinkers. They hold their views because these are different from those held by the common herd, consequently they are superior to the general run of the profession. It is this feeling of superiority which is the *fons et origo* of their views. Some, of course, are constitutional obstructionists, and they oppose because it is their nature to oppose; but the majority enjoy the feeling that they are far above the intellectual level of their compeers. It has been said that if medicine were a science these various excrescences would not exist; but is astronomy less a

science because of astrology; is psychology unscientific because of spiritism, and is our whole knowledge of physics to be sent to the lumber-room because of fourth dimensionists, circle squarers and perpetual-motion cranks?

As therapeutic medicine gains ground, pseudo-scientific medicine will lose it, and the latter will eventually go the way of all pseudo-science.—H. S., *Lancet-Clinic*.

FEE-SPLITTING.

It is high time that the organized profession gave serious consideration to the meretricious evil known as fee-splitting, where one physician refers a patient to another doctor and for that favor receives a percentage of the fee from the man who actually serves the case.

This evil thing is utterly abhorrent to the upright physician and absolutely contrary to all the traditions of medicine; yet it has grown and spread like an insidious disease until it has become scandalously prevalent and threatens to discredit the whole profession everywhere. While the pernicious custom has always been deplored by conscientious medical men, it has never received serious attention nor has a concerted movement toward its eradication ever come to a head; it has long been preached at, but no vigorous action against it has ever been instituted, with the result that today the secular magazines and the lay press are beginning to denounce the practice and the profession in no mistaken terms. In Pearson's magazine for September, eight pages are devoted to a discussion of the subject, and in very plain language the profession is called to account. But numerous writers have touched the canker from time to time in various medical societies over the country, although remedial measures have gone no further than these polemical dissertations.

There seems to have been, and there still is we fear, a spirit of incredulity in a large part of the profession toward the real facts in the case, an attitude that is in part at least responsible for the present condition. The *Journal of the American Medical Association* for March 11, 1911, in an editorial discussion of the "Secret Commission Evil," says: "The giving and receiving of secret commissions has been discussed with increasing frequency for several years. Although

the existence of the practice has long been recognized, we have always believed that it has been confined to a comparatively small number of physicians. . . . We are loathe to believe that the condition is as bad as represented." This editorial condemns the practice roundly enough, but its few words of mitigation practically annul its force.

More to the point is a paper recently read before the Jackson County Medical Society by Dr. Scott P. Child, who says, among other things: "There is not a difference of opinion that commercialism with its parasites, speculation and graft, has a strong hold in our midst, and that by certain practices resorted to, openly or in secret, the high purposes of the profession are thwarted, the individual and public welfare is disregarded, and the true development of medical science is checked, and may I add, the regular profession is humbled." The full text of Dr. Child's paper appears on another page in this issue, and should be read and pondered by every member; furthermore, it should be made the subject of discussion in every component county medical society.

There is urgent and crying need of systematic and determined effort to correct this shameful abuse which has become the Achilles-heel of medicine; to punish the offenders and, if need be, to drive them without the camp. This cannot be accomplished through sporadic reading of compositions or earnest editorials; it must be done by active and untiring measures on the part of the medical societies with the co-operation of all those who love their profession and hold her honor dear.

The secular press and journals should look to themselves also before they undertake to reproach us for this untoward state of affairs. As long as the press encourages the nefarious commercialism of every faker and of every fraud that walks, by sanctioning his methods and aiding his schemes in the publication of cards and claims in the advertising columns, just so long will the condition exist that makes possible the evil of fee-splitting with its attendant crimes, for it is generally admitted that financial costiveness is the contributing occasion for it, and although this cannot excuse the delinquency of the guilty practitioner, its pertinency to the main question must be recognized. The magazine that so loudly called us to task is not

beyond or above the very condemnation it would heap on the profession, for in its pages appear advertisements exploiting that sort of trades people whose unethical foraging on the territory of legitimate medicine is responsible in large measure for the existence of the blemish that has come to be a real blot on our escutcheon. Newspapers and lay periodicals generally should realize that there is a code of ethics incumbent upon them, and that they are under an obligation to the public whom they are supposed to serve to protect the people from the wiles of the charlatan and from the ravages of the voracious human shark. They should also realize that they owe something along this line to the medical profession as well.

In one of his addresses Dr. William Osler says: "Always seek your own interests, make of a high and sacred calling a sordid business, regard your fellow-creatures as so many tools of trade, and if your heart's desire is for riches they may be yours; but you will have bartered away the birthright of a noble heritage, traduced the physician's well-deserved title of the Friend of Man, and falsified the best traditions of an ancient and honorable Guild."

The spirit of that peroration should prompt the organized medical profession to an active investigation of the calamitous condition that obtains only too generally and incite a determined movement for its immediate elimination.

SEE HOW THEY SQUIRM!

When underground enemies attack the health and life of salutary vegetation they object to any interference from above, and if transfixed by the exploring needle, immediately begin to kick and squirm in such a way as to divert the attention of kind-hearted observers from their predatory nature and concentrate it upon their sufferings. "See how it hurts our business" they cry, regardless of the slowly shriveling foliage above them. Meanwhile, they not only rob the trees of needed nourishment, but establish lines of demarkation beyond which it cannot penetrate. Then they have a monopoly until the probe touches them. Then see how they squirm.

A circular now mailed to doctors all over the land is entitled "Cutting Dr. Wiley Open." It is a savage attack upon that active gentleman, his "plans," his "schemes and policies," though what such plans,

schemes and policies may be it fails to state. Neither does it state who is footing the heavy bills for such a campaign, though the "National League of Medical Freedom" is mentioned and attention is drawn to the very natural fact that as soon as that organization began to distribute liberal advertisements among the newspapers those palladiums of liberty "began to make fair and intelligent comment" upon Dr. Wiley and the pure food laws.

It is to be inferred that previous to the distribution of funds in the shape of liberal advertising, the comments made by said newspapers were neither "fair nor intelligent." The rotten-catsup and glue-jelly manufacturers are trying to divert attention from the true tissues. The question for Congress, as the representative of the people's welfare, to decide, is *not* whether Dr. Wiley is a good chemist, or doctor or physiologist. He takes no step on his own unaided judgment, but is governed by the results of careful, extensive experiments directed by specially trained investigators. The question is, shall manufacturers be allowed to either tell a lie in their labels, or to conceal the truth by failing to place on their packages true statements of their constituent elements. It is the law—it is the health of the people they are trying to "cut open," not Dr. Wiley.—Southern Medical Journal, December, 1911.

Miscellaneous.

Pruritus Ani.—In the London Practitioner for October, 1911, Wallis tells us that if the pruritus is due to something other than the abrasion, or hypertrophied papillae, it is of a transient character and can be readily cured. Many local applications are palliative and comforting, and amongst them the following formula will be found useful:

Chloretone, 1 drachm.
Extract of conium, 1 drachm.
Euthymol cream, 2 ounces.

This is applied after the local skin area has been well washed with soap and water. When there is any skin irritation, such as eczema or erythema, the following lotion may be used:

Calamine, 1 ounce.
Zinc oxide, 1 ounce.
Liq. carbonis, 1 ounce.
Glycerin, 1 ounce.
Aq. calcis, 4 ounces.
Orange-flower water, 4 ounces.

The irritation can be relieved by the application of a 1-in-20 solution of carbolic acid, and a two per cent solution of tincture of iodine in rectified spirits will also produce temporary relief.

When the irritation is due to any small polypus, or prolapsing mucous membrane, or to hemorrhoids, their removal causes the pruritus to disappear.

Before proceeding to any other treatment it is as well in all cases to examine the urine for sugar. The author has in one or two instances in comparatively young people met with a condition of pruritus which was quite sufficiently obvious to call for treatment. On examining the urine of these cases it was found to contain a considerable amount of sugar, and when this was got rid of by dieting, etc., the pruritus disappeared.

The various operative measures of treatment may be limited to the three following: (1) Sir Charles Ball's operation. (2) Louis F. Krause's (of Cincinnati) modification. Both the foregoing are skin-flap operations. (3) Excision of the entire ring of the anorectal tissue—an operation which the writer has performed for this and other rectal troubles for the last twelve years.

In both the skin-flap operations it is said that the subcutaneous division of the nerves going to the skin area effects a cure by destroying the communication of an irritable nerve end with the skin, but in neither of these instances does it seem that the acknowledged cause of the pruritus is attacked. Good results have been reported in both these operations, and of the two perhaps Krause's is best. He makes from four to six linear skin incisions, radiating from the anus itself, and undercuts the skin between the adjacent incisions until the whole affected area is undermined, and when all the adhesions are loosened, and the bleeding stopped, the skin-flaps are replaced and sutured. Krause claims for his operation that there is better nourishment for the flap and there is less risk of sloughing, which has occurred at various times after the performance of Ball's operation.

The criticism the writer makes concerning both these operations is that they are operations that are carried out for the treatment of a symptom and do not necessarily cure the disease, although he is aware that in

some of Sir Charles Ball's cases the irritation has not recurred for some considerable time after the operation.

It is a fact that the original lesion occurs at the anorectal junction, and it will be obvious that the radical cure for this will be to excise the whole ring of affected tissue which lies between the anal margin and the commencement of the true mucous membrane, bringing healthy mucous membrane to the skin edge. The length of the tissue removed varies from two to four centimeters.—The Therapeutic Gazette, December, 1911.

Epidural Injections for Backache.—Hans Albrecht (Zent. f. Gyn., January 14, 1911) says that backache is a symptom that results from all sorts of conditions. It may be of peripheral or central origin; it is associated with pyelitis, chronic constipation, sigmoiditis, gastropnoxis and enteropnoxis, due to the pelvic congestion that is produced by them. Hyperesthesia and hyperalgesia of the spinal nerve cause neuralgic pains. The author divides these manifestations of pain into two categories, functional neuroses, reflex from some other organ, and neuralgias due to general conditions like anemia and chlorosis. These symptoms are amenable to treatment by means of epidural injection of physiological salt solution, but not if caused by major gynecological troubles. Of the cases treated in this way there were sixteen of severe functional neuroses, nine of which were cured by the first injection, one after three injections; four cases were improved, and two had no result. There were six cases of infantile uterus; in four, recovery from pain was immediate; in one, relief was temporary, and one had no result. There were seven cases of enteropnoxis. After other means had been used to relieve the prolapsus, six were relieved of the backache by injections of salt solution. Of cases of retroflexed uterus with pain after fixation, pain remained in seven and in three cases was relieved by injections; three were not benefited. Of thirteen cases of old inflammatory lesions of the adnexa, eleven were relieved by injection. In two cases of backache, after extirpation of the uterus relief was given. In seven cases of enuresis there was prompt relief in two. The report includes fifty-three cases of backache with 72 per cent of cures,

25 per cent of negative results. Relief is not obtained in major genital diseases, but is marked in neuroses and neuralgias.—A. J. Obs. and Gyn., May, 1911.

Fever.—In the October number of the American Journal of the Medical Sciences Frank Sherman Meara considers the treatment of febrile conditions. Fever, as the physician knows it, is almost invariably the result of bacterial action, and so cannot be differentiated from toxemia. Pyrexia and toxemia, however, show but little parallelism; indeed, the worst forms of toxemia may be accompanied by no pyrexia at all, while a relatively high temperature may be seen with a minimal toxemia. Briefly, then, unless the degree of temperature is inordinately high, that is, constitutes a hyperpyrexia, the treatment of fever is not an antipyretic treatment, but an antitoxemic treatment, and such fall of temperature as accompanies our efforts is incidental to them and not the object at which we aimed. The value of rest, diet, including ingestion of water, fresh air and hydrotherapy, are, of course, recognized; and as to drug administration, it, like the other measures, is aimed not at the pyrexia, but at the toxemia. Cathartics occupy an important position among the drugs, as they prevent stagnation within the bowel and the consequent absorption of putrefactive products. Our great dread in the severe intoxications such as typhoid fever, pneumonia, diphtheria, scarlet fever and sepsis is a circulatory failure: he believes the vasomotor mechanism to be here at fault and so prefers drugs that act on the vasomotor centers or the vessels. His choice is at present for caffeine, and thinks it should be given in sufficient dosage and so administered as to guarantee its arrival at the goal desired. He gives one of the soluble double salts that of caffeine and sodium benzoate or caffeine and sodium salicylate in doses of five grains every four hours. Next to caffeine he uses a 10 or 20 per cent solution of camphor in olive oil and gives at least five grains every four hours hypodermically, often alternating with the caffeine, thus giving a dose every two hours. Personally, he has less faith in strychnin. We cannot exclude the heart in all cases, and so, if the vasomotor stimulants are not efficacious he uses digitalis in one-half ounce doses of the infusion, and because

of its slowness he uses as an initial dose one-half milligram of strophanthin intramuscularly. As to the antipyretics, these drugs are depressants and should never be used where the circulation is impaired.—Cleveland Medical Journal.

Some Aspects of Abdominal Ptos.—Mumford (Boston Medical and Surgical Journal, August 10, 1911), after a discussion of this somewhat involved subject, notes that treatment consists in postures; in the wearing of braces and belts; in exercises; and in operations. If the author has a moderate case of abdominal ptosis to deal with he gives the patient these instructions: Three times a day, after meals, lie down for half an hour on a flat, hard mattress without a pillow under the head, but with a small pillow between the shoulder-blades. At least once a day assume an exaggerated Trendelenburg position by raising the foot of the bed or sofa much higher than the head. Supplement the postures by shoulder-braces, which usually tend to correct the rounding shoulders and make easier a proper elevation of the head and dorsal spine. Employ such massage and light, graded exercises under direction as shall stimulate and improve the condition of all the muscles, especially those of the back, abdomen and shoulders. Have made, and wear continuously, except when in bed, a proper abdominal support. The writer observes, parenthetically, that a proper abdominal support is extremely difficult to secure; he has been working at the problem for some five years, and with the assistance of a skilled corset-maker has now developed two "corset-belts," as he calls them, which raise the abdomen and support the dorsal spine. These abdominal supports obviously cannot replace the prolapsed viscera, but they do lift them slightly and take the strain off from the stretched mesenteries.

The operations which may be done are numerous, but the indications are intricate and difficult. We endeavor to re-establish in proper continuity the fecal stream. This is done sometimes by appendicostomy, sometimes by a temporary colostomy which supplies an artificial anus, sometimes by implanting the ileum into the sigmoid flexure, and sometimes by removal of the whole colon, so that the stream from the small intestines empties directly into the sigmoid.

Briefly, the results of studies in abdominal ptosis are encouraging. Nearly 90 per cent of the cases are much improved, and the symptoms are often relieved by the simple methods of posture and by abdominal supports. A few rare cases have required operation, and the indications for such operations are becoming constantly more obvious while the results are more and more satisfactory.—*Therapeutic Gazette*, December, 1911.

County Societies.

JEFFERSON COUNTY.—The Jefferson County Medical Society convened in regular session January 2, 1912, with the following members present: Drs. Blackwell, Breath-witt, Brunson, Caruthers, Hankinson, Johns, Palmer, Rowell, Stewart, Woodul.

The minutes of the previous meeting were read and approved.

Dr. Charles Hudin of New Gascony and Dr. G. D. Shaw of Tory were admitted to membership.

This being the annual time for the election of officers, an election was held with the following results:

President—W. T. Lowe, Pine Bluff.

Vice President—J. W. Johns, Pine Bluff.

Secretary-Treasurer—T. W. Woodul, Pine Bluff.

Delegate to State Society—D. B. Luck, Pine Bluff.

Alternate—Wm. Crutcher, Pine Bluff.

The application of Dr. J. M. Leman of Pine Bluff was referred to the Board of Censors.

The next meeting will be held on February 2.

T. W. Woodul, Secretary.

INDEPENDENCE COUNTY.—The Independence County Medical Society met in regular session at Batesville on Monday evening, December 4, 1911. A splendid dinner had been prepared for the members, and after two hours of social intercourse all repaired to the county courthouse for the scientific session. The following were present: L. T. Evans, O. L. Bone, J. Heyden, T. N. Rodman, J. B. Roe, W. A. Wyatt, C. J. Hinkle, J. W. Case, J. H. Kennerly, R. C. Dorr, Frank A. Gray, O. J. T. Johnston, Paul Jeffery.

The minutes of the previous meeting were read and adopted.

This being the date for the annual election of officers, the following were elected to serve for the ensuing year:

President—J. B. Roe, Newark.

Vice President—T. L. Evans, Barrenfork.

Secretary-Treasurer—F. A. Gray, Batesville.

Delegate to State Society—L. T. Evans, Batesville.

Alternate—W. A. Wyatt, Rosa.

SCIENTIFIC PROGRAM.

Dr. Paul Jeffery of Mount Olive read an interesting paper on "Malaria." The discussion was participated in by all the members and many interesting points were brought out.

Dr. C. G. Hinkle reported a series of cases of furunculosis treated with staphylococcic bacterin with marked success.

Dr. J. B. Roe of Newark read a paper on "Headache," which was a surprise to all present.

Dr. R. C. Dorr of Batesville read a most valuable and instructive paper on the business side of the profession. He emphasized the importance of thorough study and preparation, giving the best service and charging and collecting a fee commensurate with the service rendered.

Drs. Wyatt, Johnston, Bone and Gray were named as essayists for the next meeting.

Drs. Johnston and Case were retained on the Entertainment Committee.

PERSONAL ITEMS.

Drs. Rodman and Roe have moved from Sulphur Rock to Newark, where they have opened offices.

Dr. W. J. Long has moved from Hazel Grove to Sulphur Rock.

Frank A. Gray, Secretary.

BOONE COUNTY.—The Boone County Medical Society met in the Chancery Court room in Harrison, January 2, 1912, Dr. D. E. Evans, vice president, presiding. Members present: H. L. Routh, C. M. Routh, J. R. Potts, L. Kirby, Swartz Baines, A. J. Vance, J. J. Johnson, J. L. Sims, L. H. Callen, A. M. Hathecock and F. B. Kirby. Visitors, Drs. C. B. Callen and W. M. Brand.

Dr. L. Kirby read a paper entitled "Some Thoughts on the Medical License System."

Dr. D. E. Evans read a paper on "The Treatment of Puerperal Eclampsia with Veratrum Viride."

Officers elected for 1912:

Dr. D. E. Evans, president.
 Dr. L. H. Callen, vice president.
 Dr. F. B. Kirby, secretary.
 Dr. H. L. Routh, treasurer.
 Dr. C. M. Routh, delegate.
 F. B. Kirby, Secretary.

HEMPSTEAD COUNTY.—The Hempstead County Medical Society had an interesting meeting recently, at which Dr. J. H. Weaver of Hope read a good paper on "Abortion," and Dr. Sid Weaver of Fulton read an interesting paper on "Septicemia." At this meeting the following officers were elected for the coming year:

Dr. Don Smith, Hope, president.
 Dr. Sid Weaver, Fulton, vice president.
 Dr. G. E. Cannon, Hope, secretary and treasurer.

Dr. J. L. Kelly has about completed his sanitarium. He purchased the old dormitory of the Hope Institute and has remodeled it. Mr. Westmoreland is associated with him.

Dr. G. E. Cannon reports a profitable trip to the Clinical Congress of Surgeons in Philadelphia and the general clinics there and in Baltimore during November.

Dr. H. J. F. Garrett is planning a post course in New Orleans in the early part of 1912.

Dr. J. H. Weaver, local surgeon for the Iron Mountain Railroad, plans to place the names of all Sunday school pupils and members of Hempstead County Medical Society in the cornerstone of the new depot now being built for our city.

Dr. B'Shears, our efficient county judge, is planning to dispose of the present county poor farm and build an up-to-date county hospital in the suburbs of one of our towns.

Dr. Don Smith has recently returned from a trip to Philadelphia and Baltimore, where he has been attending clinics and the Clinical Congress of Surgeons.

G. E. Cannon, Secretary.

DALLAS COUNTY.—The Dallas County Medical Society met at Fordyce on the 20th of December with the following present: C. J. March, F. E. Harrison, W. L. Worthington, O. W. Hope and H. H. Atkinson.

Dr. March read an interesting report of a case of "Pellagra" with treatment, which

consisted in the hyperdermatic administration of cacodylate of sodium. Results so far very good. This paper was discussed by all present.

This being the meeting for the election of new officers for the coming year, the following were nominated and elected:

President—H. H. Atkinson.
 Vice President—O. W. Hope.
 Secretary—F. E. Harrison.
 Treasurer—W. L. Worthington.

The society adjourned to meet at Fordyce the second Tuesday in January.

H. H. Atkinson, Secretary.

LEE COUNTY.—At the last meeting of the Lee County Medical Society Dr. O. L. Williamson was elected president, and Dr. W. H. Deaderick secretary-treasurer, Marianna.

W. H. Deaderick, Secretary.

FAULKNER COUNTY.—At a stated meeting of the Faulkner County Medical Society, held on the 21st of December, Dr. J. E. McMahan of Kendall was elected president, Dr. I. N. McCollum of Conway, vice president, and Dr. Cecil H. Dickerson of Conway, secretary-treasurer.

J. S. Westerfield, Secretary.

GREENE COUNTY.—The Greene County Medical Society met in annual session Wednesday, January 3. Bad roads made it impossible for out-of-town members to be present.

The program for the day was laid over to next meeting and the election of officers proceeded with.

Dr. W. W. Verser, president.
 Dr. Thad Cothren, first vice president.
 Dr. E. S. Baker, second vice president.
 Dr. Jas. G. McKinzie, third vice president.
 Dr. Olive Wilson, secretary and treasurer.
 Olive Wilson, Secretary.

Marriages.

Dr. Aris W. Cox and Miss Norma Johnson of Helena, Ark., were married on the 16th of December at high noon, and left immediately for New York, where Dr. Cox will take a special course in diseases of the eye, ear, nose and throat.

OFFICERS OF THE AMERICAN MEDICAL ASSOCIATION, 1911-1912.

Next Annual Session, Atlantic City, N. J., June, 1912.

President—John B. Murphy, Chicago.

President-Elect—Abraham Jacobi, New York.

First Vice President—William Jarvis Barlow, Los Angeles.

Second Vice President—F. W. McRae, Atlanta, Ga.

Third Vice President—W. R. Tipton, Las Vegas, N. M.

Fourth Vice President—A. L. Wright, Carroll, Iowa.

Editor and General Manager—George H. Simmons, 535 Dearborn Avenue, Chicago.

Secretary—Alexander R. Craig, 535 Dearborn Avenue, Chicago.

Treasurer—William Allen Pusey, Chicago.

Board of Trustees—M. L. Harris, Chicago, 1912; C. A. Daugherty, South Bend, Ind., 1912; W. T. Councilman, Boston, 1912; W. W. Grant, Denver, 1913; Frank J. Lutz, St. Louis, 1913; C. E. Cantrell, Greenville, Tex., 1913; Philip Marvel, Atlantic City, 1914; Philip Mills Jones, San Francisco, 1914; W. T. Sarles, Sparta, Wis., 1914.

Judicial Council—Frank Billings, Chicago, 1912; A. B. Cooke, Nashville, Tenn., 1913; Alexander Lambert, New York City, 1914; James E. Moore, Minneapolis, 1915; Hubert Work, Denver, 1916; Alexander R. Craig, Chicago, Secretary.

Council on Health and Public Instruction—W. B. Cannon, Boston, 1912; J. N. McCormack, Bowling Green, Ky., 1913; H. M. Bracken, Minneapolis, 1914; W. C. Woodward, Washington, D. C., 1915; H. B. Favill, Chicago, 1916; Frederick R. Green, 535 Dearborn Avenue, Chicago, Secretary.

Council on Medical Education—James W. Holland, Philadelphia, 1912; Victor C. Vaughan, Ann Arbor, Mich., 1913; Arthur D. Bevan, Chicago, 1914; George Dock, St. Louis, 1915; J. A. Witherspoon, Nashville, Tenn., 1916; N. P. Colwell, 535 Dearborn Avenue, Chicago, Secretary.

Council on Pharmacy and Chemistry—Reid Hunt, Washington, D. C., 1912; J. H. Long, Chicago, 1912; Julius Stieglitz, Chicago, 1912; J. A. Capps, Chicago, 1913; David L. Edsall, Philadelphia, 1913; R. A. Hatcher, New York City, 1913; L. F. Kebler, Washington, D. C., 1914; John Howland, New York City, 1914; Henry Kraemer, Philadelphia, 1914; F. G. Novy, Ann Arbor, Mich., 1915; George H. Simmons, Chicago, Chairman, 1915; H. W. Wiley, Washington, D. C., 1915; O. T. Osborne, New Haven, Conn., 1916; Torald Sollmann, Cleveland, Ohio, 1916; M. I. Wilbert, Washington, D. C., 1916; W. A. Puckner, 535 Dearborn Avenue, Chicago, Secretary.

OFFICERS OF THE ARKANSAS MEDICAL SOCIETY, 1911-1912.

Next Annual Session, Hot Springs, May, 1912.

President—Morgan Smith, Little Rock, Ark.

First Vice President—J. B. Roe, Calico Rock.

Second Vice President—J. C. Amis, Fort Smith.

Third Vice President—J. W. Webster, Siloam Springs.

Treasurer—J. S. Wood, Hot Springs.

Secretary—C. P. Meriwether, Little Rock.

Legislative Committee.

Adam Guthrie, Prescott, Chairman.

R. C. Dorr, Batesville.

L. H. Barry, Hot Springs.

President and Secretary, ex-officio.

Scientific Program Committee.

J. V. Laws, Hot Springs, Chairman.

E. H. Martin, Hot Springs.

C. P. Meriwether, Little Rock.

Officers of Sections.

Medicine—H. P. Collings, Hot Springs, chairman; W. H. Toland, Mineral Springs, secretary.

Surgery—C. F. Perkins, Springdale, chairman; S. E. Thompson, El Dorado, secretary.

Obstetrics and Gynecology—W. A. Snodgrass, Little Rock, chairman; R. L. Saxon, Little Rock, secretary.

Pathology—W. F. Mount, Hot Springs, chairman; Nina V. Hardin, Fayetteville, secretary.

State Medicine and Public Hygiene—W. H. Deaderick, Marianna, chairman; L. T. Evans, Bethesda, secretary.

Dermatology and Syphilology—Wm. R. Bathurst, Little Rock, chairman; J. H. Weaver, Hope, secretary.

Diseases of Children—Wm. Crutcher, Pine Bluff, chairman; E. E. Barlow, Dermott, secretary.

Delegate to American Medical Association—G. A. Warren, Black Rock.

Alternate to American Medical Association—W. N. Yates, Fayetteville.

OFFICERS OF SECTIONS, 1911-1912.

PRACTICE OF MEDICINE—Chairman, Wilder Tilleston, New Haven, Conn.; Vice Chairman, Walter L. Bierring, Des Moines, Iowa; Secretary, Roger S. Morris, Cathedral and Mulberry Streets, Baltimore.

SURGERY—Chairman, Thomas Huntington, San Francisco; Vice Chairman, George W. Guthrie, Wilkesbarre, Pa.; Secretary, Fred T. Murphy, 309 Marlborough Street, Boston.

OBSTETRICS AND GYNECOLOGY—Chairman, C. Jeff Miller, New Orleans; Vice Chairman, George B. Somers, San Francisco; Secretary, F. F. Simpson, Jenkins Arcade Bldg., Pittsburg, Pa.

OPHTHALMOLOGY—Chairman, Adolf Alt, St. Louis; Vice Chairman, F. T. Rogers, Providence, R. I.; Secretary, Edgar S. Thomson, 19 East Forty-fourth Street, New York.

LARYNGOLOGY, OTOTOLOGY AND RHINOLOGY—Chairman, George E. Shambaugh, Chicago; Vice Chairman, Francis P. Emerson, Boston; Secretary, Burt R. Shurly, 544 Jefferson Avenue, Detroit.

DISEASES OF CHILDREN—Chairman, Isaac A. Abt, Chicago; Vice Chairman, L. T. Royster, Norfolk, Va.; Secretary, J. P. Sedgwick, 2015 Kenwood Parkway, Minneapolis.

PHARMACOLOGY AND THERAPEUTICS—Chairman, Torald Sollmann, Cleveland, Ohio; Vice Chairman, R. L. Wilbur, San Francisco; Secretary, M. I. Wilbert, Twenty-fifth and E Streets, N. W., Washington, D. C.

PATHOLOGY AND PHYSIOLOGY—Chairman, Leo Loeb, St. Louis; Vice Chairman, William Ophuls, San Francisco; Secretary, A. W. Hewlett, 902 Baldwin Street, Ann Arbor, Mich.

STOMATOLOGY—Chairman, S. L. McCurdy, Pittsburg, Pa.; Vice Chairman, Virgil Loeb, St. Louis; Secretary, Eugene S. Talbot, 31 North State Street, Chicago.

NERVOUS AND MENTAL DISEASES—Chairman, Edward D. Fisher, New York; Vice Chairman, George H. Moody, San Antonio, Tex.; Secretary, E. E. Southard, 37 Trowbridge Street, Cambridge, Mass.

DERMATOLOGY—Chairman, Charles J. White, Boston; Vice Chairman, Martin F. Engman, St. Louis, Secretary, H. R. Varney, 604 Washington Arcade, Detroit.

PREVENTIVE MEDICINE AND PUBLIC HEALTH—Chairman, Rupert Blue, San Francisco; Vice Chairman, Rosalie Slaughter Morton, New York; Secretary, C. Hampson Jones, 2529 St. Paul Street, Baltimore.

GENITO-URINARY DISEASES—Chairman, W. T. Belfield, Chicago; Vice Chairman, James Pedersen, New York; Secretary, Hugh H. Young, Professional Bldg., Baltimore.

HOSPITALS—Chairman, W. B. Russ, San Antonio, Tex.; Secretary, John A. Hornsby, Twenty-ninth Street and Groveland Avenue, Chicago.

Councilor Districts and Councilors, 1911-1912.

First Councilor District—Clay, Crittenden, Craighead, Greene, Lawrence, Mississippi, Poinsett and Randolph counties. Councilor, M. C. Hughey, Rector. Term of office expires 1913.

Second Councilor District—Clebune, Fulton, Independence, Izard, Jackson, Sharp and White counties. Councilor, J. H. Kennerly, Batesville. Term of office expires 1912.

Third Councilor District—Arkansas, Cross, Lee, Lonoke, Monroe, Phillips, Prairie, St. Francis and Woodruff counties. Councilor, T. B. Bradford, Cotton Plant. Term of office expires 1913.

Fourth Councilor District—Ashley, Bradley, Chicot, Cleveland, Desha, Drew, Jefferson and Lincoln counties. Councilor, A. D. Knott, Wilmot. Term of office expires 1912.

Fifth Councilor District—Calhoun, Columbia, Dallas, Lafayette, Ouachita and Union counties. Councilor, R. A. Hilton, El Dorado. Term of office expires 1913.

Sixth Councilor District—Hempstead, Howard, Little River, Miller, Nevada, Pike, Polk and Sevier counties. Councilor, L. J. Kosminsky, Texarkana. Term of office expires 1912.

Seventh Councilor District—Clark, Garland, Hot Spring, Montgomery, Saline, Scott and Grant counties. Councilor, R. Y. Phillips, Malvern. Term of office expires 1913.

Eighth Councilor District—Conway, Johnson, Faulkner, Perry, Pulaski, Yell and Pope counties. Councilor, A. H. McKenzie, Dardanelle. Term of office expires 1912.

Ninth Councilor District—Baxter, Boone, Carroll, Marion, Newton, Searcy, Stone and Van Buren counties. Councilor, F. B. Kirby, Harrison. Term of office expires 1913.

Tenth Councilor District—Benton, Crawford, Franklin, Logan, Sebastian, Madison and Washington counties. Councilor, M. S. Dibrell, Van Buren. Term of office expires 1912.

STATE MEDICAL BOARD OF THE ARKANSAS MEDICAL SOCIETY.

First District—M. Fink, Helena.
 Second District—F. T. Murphy, Brinkley.
 Third District—F. B. Young, Springdale.
 Fourth District—F. T. Isibell, Horatio.
 Fifth District—G. S. Brown, Conway.
 Sixth District—W. S. Stewart, Pine Bluff.
 Seventh District—J. C. Wallis, Arkadelphia.

ECLECTIC STATE MEDICAL BOARD.

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OFFICERS OF COMPONENT SOCIETIES, 1911-1912.

County Society	President	Address	Secretary	Address
Arkansas.....	W. H. Boswell.....	Almyra.....	E. H. Winkler.....	DeWitt
Ashley.....	M. C. Hawkins.....	Parkdale.....	A. E. Cone.....	Portland
Baxter.....	J. T. Tipton.....	Mountain Home.....	J. J. Morrow.....	Cotter
Benton.....	J. W. Webster.....	Siloam Springs.....	J. A. Fergus.....	Rogers
Boone.....	J. H. Fowler.....	Harrison.....	F. B. Kirby.....	Harrison
Bradley.....	C. N. Martin.....	Warren.....	B. H. Green.....	Warren
Calhoun.....	E. T. Jones.....	Hampton.....	T. E. Rhine.....	Thornton
Carroll.....	J. F. John.....	Eureka Springs.....	J. Fred Bolton.....	Eureka Springs
Chicot.....			E. E. Barlow.....	Dermott
Clay.....	I. H. Cunnning.....	Knobel.....	N. J. Latimer.....	Corning
Clark.....			J. H. Bell.....	Arkadelphia
Cleveland.....	W. L. Hartsell.....	Draughon.....	J. F. Crump.....	Rison
Columbia.....			P. M. Smith.....	Magnolia
Conway.....	F. Gordon.....	Morrilton.....	G. W. Ringgold.....	Morrilton
Craighead.....	H. T. Altman.....	Jonesboro.....	P. W. Lutterloh.....	Jonesboro
Crawford.....	O. M. Bourland.....	Van Buren.....	J. E. Blakemore.....	Van Buren
Dallas.....	C. J. March.....	Fordyce.....	H. T. Atkinson.....	Fordyce
Desha.....	J. M. Stuart.....	McGehee.....	R. R. King.....	Walnut Lake
Drew.....	M. Y. Pope.....	Monticello.....	M. B. Corrigan.....	Monticello
Faulkner.....	W. R. Greeson.....	Conway.....	J. S. Westerfield.....	Conway
Franklin.....	J. C. Harrod.....	Denning.....	Thomas Douglass.....	Ozark
Grant.....	J. L. Butler.....	Sheridan.....	W. G. Pitman.....	Grape Vine
Greene.....	L. Jones.....	Beech Grove.....	Olive Wilson.....	Paragould
Hempstead.....	E. J. Gillespie.....	Hope.....	H. R. Giles.....	Hope
Hot Spring.....	E. T. Bramlett.....	Malvern.....	R. Y. Phillips.....	Malvern
Hot Spring-Garland.....	L. H. Barry.....	Hot Springs.....	J. S. Wood.....	Hot Springs
Howard-Pike.....	W. S. Robinson.....	Nashville.....	J. S. Hopkins.....	Nashville
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Jackson.....	A. L. Best.....	Newport.....	C. W. Martin.....	Newport
Jefferson.....	J. S. Jenkins.....	Pine Bluff.....	T. W. Woodul.....	Pine Bluff
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Lincoln.....	W. C. Kimbro.....	Tyrod.....	B. F. Farver.....	Star City
Logan.....			J. S. Shibley.....	Booneville
Lonoke.....	S. A. Southall.....	Lonoke.....	F. A. Corn.....	Lonoke
Miller.....	C. A. Smith.....	Texarkana.....	Earl Fuller.....	Texarkana
Mississippi.....	E. E. Craig.....	Wilson.....	O. Howton.....	Oxcoila
Monroe.....	T. T. Murphy.....	Brinkley.....	E. D. McKnight.....	Brinkley
Montgomery.....	J. B. Steuart.....	Womble.....	L. S. Kennedy.....	Mt. Ida
Nevada.....	Adam Guthrie.....	Prescott.....	A. S. Buchanan.....	Carlsbad, N. Mex.
Ouachita.....	W. L. Newton.....	Camden.....	C. S. Early.....	Camden
Perry.....	M. E. Howard.....	Perryville.....	W. T. Blackwell.....	Bigelow
Phillips.....	L. Hall.....	Turner.....	M. Fink.....	Helena
Polk.....			F. A. Lee.....	Mena
Pope.....	H. B. Wiggs.....	Russellville.....	J. F. Hays.....	Russellville
Prairie.....	J. C. Gilliman.....	Des Arc.....	James Parker.....	DeVall's Bluff
Pulaski.....	Milton Vaughan.....	Little Rock.....	J. B. Dooley.....	Little Rock
Randolph.....	T. Z. Johnson.....	Holmes.....	W. E. Hamil.....	Pocahontas
Saline.....	Dewell Gann.....	Benton.....	W. Kelly.....	Benton
Sebastian.....	J. C. Annis.....	Fort Smith.....	Clark Wood.....	Fort Smith
Searcy.....	R. L. Russell.....	Leslie.....	J. O. Cotton.....	Leslie
Sevier.....	C. E. Kitchens.....	DeQueen.....	W. E. Wilson.....	DeQueen
Sharp.....	T. J. Woods.....	Evening Shade.....	A. F. Gray.....	Hardy
St. Francis.....	L. H. Merritt.....	Forrest City.....	J. A. Bogart.....	Forrest City
Union.....	S. E. Thompson.....	El Dorado.....	F. O. Mahoney.....	Huttig
Washington.....	P. L. Hatcock.....	Lincoln.....	Nina V. Hardin.....	Payetteville
White.....	F. L. Jones.....	Searcy.....	J. W. Hassell.....	Searcy
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CONTENTS.

Original Articles:

- The Repair of Injuries to the Parturient-
Canal Sustained During Delivery, by J. P.
Runyan, M. D., Little Rock..... 241
- The Treatment of Typhoid Fever and Its
Most Frequent Complications, by O. O.
Hammonds, M. D., DeQueen..... 242
- Curetage; Its Indication and Technic, by
R. L. Saxon, M. D., Little Rock..... 244
- Neurasthenia and Psychasthenia, a Differ-
ence, by S. A. Rucker, M. D., Memphis,
Tenn. 249

Editorials:

- Do This Now..... 251
- St. Luke's Hospital..... 251
- Banquet Union County Medical Society..... 251
- Better Attendance..... 253
- State Charity Hospital..... 254

Department of Medical Jurisprudence:

- Physicians' Right to Compensation, by Hon.
R. L. Floyd, Little Rock..... 254

Personal Mention..... 255

County Societies:

- Garland County..... 255
- Washington County..... 256
- Drew County..... 256
- Benton County..... 257
- Union County..... 257
- Woodruff County..... 259

Book Reviews..... 259



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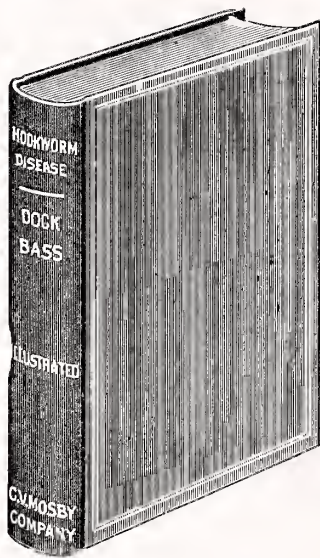
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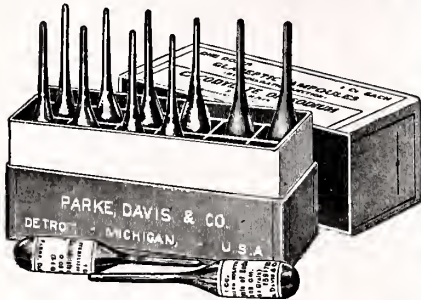
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Original Articles.

THE REPAIR OF INJURIES TO THE PARTURIENT-CANAL SUSTAINED DURING DELIVERY.*

By J. P. Runyan, M. D.,
Little Rock, Ark.

What I shall say tonight is in no wise original, yet, I dare say, much of it will be at variance with the practice of the majority of those present. What I shall say is based upon observation, not so much as an obstetrician as a surgeon and a gynecologist. It is, or should be, the aim of every one to do that which will most benefit his patient in every instance. Many customs which prevailed long ago, and are now considered obsolete, were relegated to the scrap pile of oblivion by the pathfinders who were able to see the error of their way, and who had the courage to follow their convictions. It is at times difficult to get out of a "rut," even in a progressive profession like ours. For instance, I cite the resistance of the older members of our profession when called upon to adopt asepsis and antisepsis

in the practice of surgery. They clung to their old methods until almost swept off their feet by the onward march of the progressives, who had seen the light and had courage to follow later.

It is the custom, almost universally, being taught in nearly all the medical schools, to do immediate repair of perineal lacerations sustained during delivery. As a rule cervical tears receive no attention until some time later. We have all seen many failures, partial and complete, following immediate repair and we consoled ourselves when confronted with these failures, that our patient was no worse off than if no effort had been made to repair the damage, but let us ask ourselves the question: Can we, immediately after delivery, with the parts badly swollen, as is the case in nearly every instance, determine the exact amount of damage done to the parturient-canal? Are we not likely to overlook or underestimate the damage at this time? Might not the overlooking or underestimating of the damage prove detrimental to the best interests of the patient? Would it not be better to postpone till some future time when conditions would be more favorable, both for determination of damage done and repair of same, to make a careful and critical examination, at which time be prepared

*Read at the annual meeting of the Union County Medical Society, held at El Dorado, February 5, 1912.

to repair, not one, but all lacerations that may have occurred, with almost a certainty of complete success? If so, for how long a period after delivery should this operation be deferred? These are questions that should present themselves for our serious consideration. Upon our solution of them may depend the health and happiness of many who look to us for guidance and assistance. Let us look at the facts as they present themselves to us in our every-day practice. It is no uncommon thing for a woman to present herself at my office for examination for some pelvic discomfort, and when told that she has laceration that needs repair, to exclaim that her doctor had not told her she had a laceration, or that her doctor had assured her he had repaired the damage which he recognized immediately following delivery, either of which errors should not be excusable and which may be avoided, provided the plan I shall advocate be followed.

Within a week or ten days, subsequent to delivery, subsidence of all swelling will have taken place, as well as most of the soreness, which will allow of a careful examination of damage to any part of the parturient-canal that may have occurred, including that of the cervix as well as the perineum and vaginal vault. Many submucous tears that would otherwise be overlooked will be recognized and repaired, thus obviating the necessity of a second operation. The objections that might be urged against this method of procedure are: First, that it delays the puerperal convalescence; second, that there is more danger of sepsis if a lacerated perineum is left unrepaired for a number of days; third, that it is considerably more trouble to do this work a week or ten days later than at the time of delivery; fourth, that the pay we receive for obstetrical work will not justify the extra trouble.

To the first objection I would say it will not materially delay the convalescence, and the restoration to perfect health will more than compensate for the time. To the second I will state that instead of there being more danger of sepsis I believe there is less, because it is not wounds with free drainage that give us the most anxiety, but the closed ones. The fear is not justified by experience. To the third objection I will say that better results far more than counterbalance all the extra trouble. To the fourth objec-

tion I wish to say that it is hardly in keeping with the dignity of our profession to weigh money in the balance with good health. Besides, anything worth doing at all is worth doing well, and if we undertake to do anything worth a hundred dollars for five we should do it just as conscientiously. My observation is that people are nearly always willing to pay for good service, and any fee paid for poor service is entirely too much. Barton Cook Hirst makes it a routine practice to repair on the seventh day subsequent to delivery all lacerations, and after an experience of seven years claims he has not had a failure of primary union. He follows this rule both in incomplete and complete tears with uniform results.

THE TREATMENT OF TYPHOID FEVER AND ITS MOST FREQUENT COMPLICATIONS.*

By O. O. Hammonds, M. D.,
De Queen.

When the chairman invited me to read a paper on some part of typhoid fever, I hesitated for some time, fearing that I would be bringing to your attention so much that was already well known, and so little which is novel. In the hope, however, of inducing a discussion the invitation was accepted.

Next to tuberculosis typhoid fever has come in for its share of attention, and very justly so, when we consider the total number of deaths caused by typhoid fever in the registration area of the United States for the year 1909 was 10,722. The many symptoms, complications and sequelae render it the most interesting disease to the hospital physician, and the most worrisome to the family practitioner.

It is my purpose rather to outline the management of the ordinary case in private practice and the treatment of the most frequent serious complications, namely, toxemia, feeding, tympanites, hemorrhage and perforation. I know of no other disease in which a nurse can do so much good, therefore the first essential in the treatment of any case of typhoid fever is the selection of a good trained nurse.

*Read in the Section on Medicine at the thirty-fifth annual session of the Arkansas Medical Society, held at Fort Smith, May 3-6, 1911.

While it is true many cases recover without such ministration, yet no one can tell which case will perforate, have a hemorrhage or other serious trouble, where only prompt recognition and treatment will avoid a fatal issue. The patient must never be left alone if there is the slightest sign of delirium. Good nursing includes the care of urine, of stools, the mouth, the back, the recording of pulse and temperature every three hours, when awake, and the securing of rest and quiet by allowing no one to see the patient. Of late we do not so often hear of cures or specifics for typhoid fever. We have sufficient clinical evidence that the disease can be prevented by means of vaccines, but as yet there is little evidence that serums are of any value in the treatment of the disease. Intestinal antiseptics do not cure the disease, but some of them seem to lessen fermentative changes in the stomach and bowels. Nothing favors hemorrhage and perforation more than fermentation and distention, so that we should take every precaution to prevent it. By the continuous use of salol, three to five grain doses, or a salicylate in five-grain doses, with one minim of guaiacol, every four hours, I feel that fermentation and distension is lessened. To be of benefit they must be begun early, and in these small doses seldom disagree with the patient. Unless we give some medicine with this end in view there is no necessity of giving any medicine as a routine measure. If the patient is constipated, I usually obtain a daily stool by means of castor oil or enema. A moderate diarrhea should be regarded as an effort of nature to get rid of poisonous products and not to be feared. If marked, feeding is often at fault. Often a few doses of bismuth subnitrate and Dovers powder will be all that is required. If not, small doses of acetate of lead may be added. These agents sometimes cause distention.

The question of feeding is one of great importance. The past generation resorted to starving. Of late, the tendency is to give these patients a more liberal diet. In the aged and asthenic every means of increasing the patient's resistance by means of nourishment must be employed. In young, strong adults I rather lean toward starvation treatment. Milk is the best of all foods provided it agrees, given every three hours when awake. About thirty to forty ounces is a

fair daily average. It will agree with about seventy per cent of patients. When there is gastric disturbance, nausea, distention, or many curds in stool, milk should be lessened and if it cannot be borne in smaller quantities, discontinued altogether. In these cases we are apt to have trouble with other foods. Egg albumin, gelatin or beef juice often agrees. Give no solid food until temperature remains normal for ten days.

According to statistics, there can be no question of the beneficial influence of tub baths, as advised by Brandt, in the majority of strong, vigorous patients. A severe toxemia reacts to nothing quite so well. The value of the bath is not alone due to its effect on temperature, but more to its vasomotor stimulation. The toxemia seems to crush the nervous system, and nothing revives it so much as bathing of some kind. In private practice this is usually accomplished by means of an improvised bath tub or more often by sponging, which meets the indications very well except in cases of severe toxemia. There are some cases, and especially in children, who do not bear cold baths very well. In these I use temperature bath or sponging. It is the routine practice in institutions to give bath every three hours when temperature goes above 102 1-2 F., but as the temperature is not the only indication we must be guided by the symptoms of toxemia as a whole. In most cases it will seldom be necessary to give more than four baths in twenty-four hours. In every case they should be accompanied with vigorous rubbing, especially along the spine and lower limbs. Other remedies for toxemia and depression are strychnine, caffeine, whiskey, and in extreme cases normal saline and adrenalin. A better understanding of the exact indication for whiskey has reduced the use of this agent in typhoid fever by at least seventy per cent. It is seldom required during the first or second week and in mild cases not at all. Indications are a feeble, irregular or rapid pulse, a dry, brown tongue and the presence of low, muttering delirium.

Early tympanites means fault in diet; later, evidence of toxemia and shows that the nervous system is losing in the struggle. If baths do not control it we should try ice bag over umbilicus, turpentine stupes, turpentine enema or milk asafœtida, also inter-

nal administration of turpentine, five to ten drops every four hours. Oil of cloves three or four drops every four hours often acts well. Failing in this, pass a soft rectal tube high up and let it remain for a short time.

Hemorrhage, no matter how slight, should cause alarm. The patient should be kept quiet, no food by mouth, for at least forty-eight hours, if bleeding has been marked. In every case I usually give calcium lactate or chloride. If severe, hypodermic of morphine and atropine. Control bowels for forty-eight or seventy-two hours with opium and acetate of lead if there is no distention. Ice bag locally will aid in keeping patient quiet, if it has no other value. In severe cases normal saline must be given hypodermically or intravenously. Many claim it raises blood pressure and theoretically increases hemorrhage, but the human body does not always obey the mechanical laws of inorganic bodies.

In every case of perforation immediate operation is demanded. Of course if there is absolute refusal our only hope lies in the use of opium and quiet. No feeding or bathing for forty-eight or seventy-two hours. Under this plan the death rate will be about ninety-five per cent. In reviewing the literature we find a number of contributions on the subject. G. E. Armstrong reported ninety-three cases of perforation treated in the Montreal General Hospital. In addition, three cases in another hospital and one case operated upon in private house; of these four, three recovered. Of the whole ninety-seven, seventy-eight were operated on and twenty-four, or 30.76 per cent, recovered. G. D. Head analyzes the results of 133 operations for perforation; sixteen were performed within three hours of the onset of symptoms; fifty per cent recovered; twenty-five between three and six hours; forty-four per cent recovered; twenty-two between six and twelve hours; twenty per cent recovered. Of those between twenty-four and forty-eight hours, eleven per cent recovered. C. Bayley reports seven cases, three died without surgical interference, the remaining four were operated on, with one death, or a recovery rate of seventy-five per cent. Such favorable reports as these do not justify any one in treating perforations by medicinal agents alone, but show the propriety of an early operation.

CURETAGE; ITS INDICATIONS AND TECHNIC.*

By R. L. Saxon, M. D.,
Little Rock.

This is an operative procedure that we all have to deal with, and one of the simplest and most frequent operations pertaining to the pelvic region; yet may be the cause of some of the gravest complications, and it is for the protection of these facts and for the attraction of the attention of the medical men of this meeting that I select so simple and on the other hand so important a subject.

The indications for curetage are as varied as the opinions of medical men. Like the therapeutic treatment of malaria and disorders of the liver, when we cannot ascribe for the pelvic derangement any positive cause we advise or do curetage. This does not solely apply to the general medical man, but often to the specialist as well. We are too apt and ready when we have pain in the pelvis, leucorrhea, painful micturition, or amenorrhea, to advise a curetage. I do not wish to take away any of the credit due this operation, nor do I wish to depreciate its value in the minds of my hearers, but only ask your attention to my understanding of its needs and the way I do it, and that, in a suggestive way. The uterus should never be cureted unless some part of it becomes pathological. I do not believe in operating on physiological or normal tissues of one organ. We can cure a pathological condition in another organ, so in a general statement I should say that where there are pathological structures or arrangements in the uterus or growing from or lodged in it, or in any of its three chief layers, we may get good results from curetage. Curetage means a complete removal of the abnormal deposits with the endometrium of the uterus. So we may divide the indications thusly:

1. For substances lodged in the uterus or growing from the tissues: (a) Foreign bodies mechanically or accidentally put in the uterus, e. g., rubbers, syringe tips, pessaries, probes, instruments of violence or accidents;

*Read in the Section on Gynecology at the thirty-fifth annual session of the Arkansas Medical Society, held at Fort Smith, May 3-6, 1911.

(b) any or all of the membranes or products of conception; (c) tumors of any of the layers of the uterus, such as cancers, fibroids and cysts.

2. Pathologic changes in either or all of the layers of the uterus: (a) sub and super-involutions of the uterus from any cause; (b) fibrinous endometritis, metritis or perimetritis; (c) catarrhal conditions of any of the tissues, especially of a chronic form.

3. Infections producing pathologic tissue in either of the three layers of the uterus, such as: (a) Puerperal sepsis, (b) gonorrheal endometritis, (c) tuberculous endometritis.

Most any substance may be put in the uterus by the patient trying to prevent or get rid of conception or during the excitation of self abuse. Any foreign substance may be lodged by accident or violence in the uterine tissues and may be removed by curetage. After abortions and miscarriages or deliveries there may be left a part of the fetus or membranes or some of the embryonic tissues that may give trouble or begin to develop new growths. This can profitably be removed by the curet. The normal tissues may under certain conditions develop abnormal tissues or overgrowths, which will interfere with the functions of the endometrium; also small hematoma may be removed by the curet with good effect. Cancer and tuberculous tumors may be relieved if in the primary site, by a scraping of the exposed surface, and especially is this true if breaking down of a tumor has taken place.

If the circulation is poor, either the inflow or outgo of the blood of the endometrium, we may have proliferation and thickening of the endometrial tissue and glandular structures and vessels multiplying that can be scraped off with the curet and relief obtained satisfactorily, as in dismenorrhea, meterrhagia, menorrhagia and amenorrhea. If this proliferation and thickening is caused by displacement of the uterus or pressure of other organs by abnormal growths, this condition or these overgrowths or displacements must be corrected at the same time of the curetage, or our expected results will be only momentary or very disappointing.

Sub and super-involutions of the uterus are usually associated with some defective blood and nerve supply and a lack of physiologic degeneration takes place. There is

an over percentage of fibrinous tissue deposit. If done in time, curetment will bring about a better and more uniform physiologic circulation in the uterine tissues that will allow the normal degeneration of the muscular structures, and will result in the properly contracting uterus. Of course, other methods of treatment that are conducive to this end must be instituted.

If there be from any cause lack of normal relations of the different tissues of the uterus there is a deposit or an extra deposit of fibrinous tissue. This may be prevented by an early curetment of the uterine cavity. A condition known as a catarrhal condition, usually produced by bad blood supply, low grades of infection of some kind, of long standing, may be relieved by a thorough curetment. The most important of all the work, perhaps, is when there is a puerperal infection or a gonorrheal invasion of the endometrium. Perhaps the most important, because it must be more carefully handled. If the infection is only in the uterus and there is no infection above this, by a thorough curetment we may save a further and more destructive complication. If the endometrium be a primary site (which is rare) perhaps we may effect a cure by the curet. If it be cancer in the last stage, we may give some relief and comfort by the curet and cautery.

Now, as to the way of doing or the technic of this operation, they are as varied perhaps as the opinions as to when it should be done. I think that with a few salient points in view we need not have any trouble with this operation, either in the home or hospital.

There are five essentials for a perfect curetment: (1) Thorough asepsis and if possible antisepsis; (2) thorough dilatation of the cervix; (3) complete removal of all the material sought in the cavity; (4) perfect contraction of the uterus to prevent hemorrhage; (5) prevent sepsis or lessen infection.

To do a curetment, clip closely the hairs from the mons and about the vulva; do not shave. Scrub with soap and water, also give a general bath; flush out the bowels thoroughly with saline solution and with enema; give light diet. All this is to be done the day before the operation. The morning of the operation give no breakfast, a hot douche and enema; empty the bladder before going to the operating table. Immediately prepare the patient, place in dorsal position on a com-

mon flat-top table, covered with a clean sheet, if in the home; on operating table if in the hospital. Anesthetize the patient; gas is the best, or combined gas and ether method. Examine to determine position of uterus; scrub off the vulva with soap and water; place the legs in the leg holders or support them by use of assistants; pull the buttocks near the edge or quite over the edge of the table; scrub out thoroughly with soap and hot water the vagina and rinse off the vulva and irrigate the vagina with 1-1000 bichloride, follow with sterile water or normal salt. Scrub out the vagina with iodine tincture. Place a clean towel or rubber pad or sheet under the buttocks, sterile towels over each leg and let them cover each thigh down and backward.

With a Simms speculum placed in the vulva pressed backward and downward and by weight or the hand of an assistant the speculum is held in place. The operator with thumb and forefinger separates the labia, pressing up and with the right hand catches the anterior lip of the cervix a good bit anteriorly with bullet forceps, being careful not to get either blade of the forceps in the cervical canal, which would interfere with the dilators, pull the cervix down to the outlet and give the handles of the forceps to one of the assistants to hold with upper hand, pulling it up and out. The operator sounds or explores the uterine cavity with a clean uterine sound, determining the depth and direction of the cavity of the fundus. With a good smooth jawed spring handle dilators (small), with jaws long enough to reach the internal os, follow the canal carefully. After the dilators are well in, with even, steady grip, dilate, first laterally and then perpendicularly, till you have dilated to the extent of these smaller dilators, or this first degree of dilatation may be done by a set of Hegar's hard rubber or steel sounds or dilators. After this take a heavy pair of dilators with ridged jaws and place them carefully in the cervical canal till the points go to the internal os, then press evenly, dilating all sides carefully and equally till you have room for the curets and to remove the substances desired. It is best to have a set of curets, three sizes, sharp and slightly curved with light handles. There is not much place for a dull curet. Take the largest curet first, introduce without much force, being careful to follow the canal to the top of the fundus. Here begin scraping

from the fundus toward the cervix with long, steady strokes, being careful to go uniformly around the entire surface, going in the same direction, scraping in the same direction till you have arrived at the starting point. Then take a smaller curet and go over the uterus in the same way and then, following this with the smallest curet, this time being careful to get into the pockets at the mouths of the tubes. You can tell when you have reached good, sound uterine tissue by the hard, grating sound, or feel, noted by the curet. After all the debris has been removed in this way, swab out the cavity with dry sterile gauze and then with a small piece of gauze placed in the cavity up to the top of the fundus leave it as a drain, letting the end be loosely packed in the vagina. Put on a vulva pad and a T bandage and put patient to bed; keep quiet for twenty-four hours on her back. If you have to give sedatives give codine or morphine sulphate in sufficient quantity to keep the patient quiet. Allow her to pass urine if she will; if not have the patient catheterized every ten or twelve hours until she voids. Move bowels on third day with salines assisted, if needed, by enema of warm soap water. Keep in bed for ten days or two weeks, giving after the third day a hot douche morning and night of hot carbolic water.

Now, there are some special points to notice that may come up in different cases under different circumstances. If the patient is a virgin and you wish to protect as much as possible the hymen try to get hold of the cervix by guiding the forceps with the finger in the rectum after the speculum has been placed in the vulva and pull the cervix to the outlet or vulva; dilate and curet as described. In this class of cases the Hegar sounds or dilators are perhaps the best and least harmful dilators.

When the curetment is for cleaning up an abortion pack the vagina to produce or allow thorough dilatation, unless you have sepsis, but in such a case you will get a complete relaxation of the tissues and there will not be much need for the instruments for dilatation, then we curet as described. To stop the hemorrhage, cause contractions, remove the clots and loose fragments, put in a smooth tip or douche curet; scraping the cavity of the uterus briskly as a strong stream of hot salt or sterile water flows into

the cavity. By such procedure we usually have no trouble in getting good contractions, stoppage of the hemorrhage and good results. In such cases we may put in a little packing of sterile or iodoform gauze and let remain for about twelve hours, removing if it be a septic case and wash out with a little sterile water or boric acid solution and replace with strip of sterile gauze as a drain. Keep this up every twenty-four hours for three or four days. Also for the relief of a flexed uterine canal it should be repacked every twenty-four or thirty-six hours sufficient to keep the angle made by the cavity of the cervix and fundus nearly straight. Usually in such cases a sedative must be given to prevent pains on severe contractions. If a case is septic I like the use of water or salt or hot boric acid solution, followed by a swab of iodine, and if it be gonorrhea perhaps a swab of pure carbolic acid is better, being careful not to get the carbolic acid on the vagina. In such septic cases I like iodoform or a saturated strip of gauze of argyrol 25 per cent solution much better. After septic cases, when we are not sure of the variety of infection, I think it is well to pack this cavity pretty tightly with argyrol gauze and to keep a strip of well-saturated gauze in for a few days after curetment. I should not use ergot and ice unless there is severe uncontrollable hemorrhage and a lack of contractions. We must be careful not to put too much pressure on the dilators or we might get a tear through the cervix. We must always determine the exact location and direction of the uterine cavity before introducing the dilators, lest we puncture the uterus at the internal os and thus go into the peritoneal cavity. Also be careful in soft, boggy and deeply diseased uterine walls that we do not shove the curet through into the peritoneal cavity. But should we do this, do not be alarmed, but finish the cureting and use no water afterward, but swab out with dry sterile gauze.

Some one has said there is more tubal and ovarian trouble produced by improper curetment than all the diseases combined. Another operator has designated the curet, the probe or sound, and the dilators, the three gynecological devils.

I usually use two assistants, one nurse, or

you may get along with one nurse and one assistant and an anesthetist.

Instruments needed are: One speculum, two sizes spring-handled dilators, two or three sizes sharp curets, standard make, one graduated sound, one dressing forceps, one bullet forceps, one applicator, one tissue forceps and one pair of scissors.

DISCUSSION.

Dr. Snodgrass, Little Rock: I have nothing of special value to add to the discussion of the paper, but I would like to emphasize the importance of perfect technic in this simple operation. So many physicians think they can curet the uterus just about as good as any one else; and they go into it totally unprepared. I consider this one of the most difficult operations we have to do if properly done. There are some points in the doctor's technic which invite criticism, especially in cureting a virgin. It is not necessary to attempt to save the hymen. If you have to operate, you might just as well go ahead. It is one of the most difficult things conceivable to curet the interior of the uterus thoroughly—all over. If you do not think it is difficult, you get a cadaver and your instruments, put it in a proper position. Let your curetment be as thorough as possible and after you think you have covered all of the surface take that uterus out and split it open and see how much of the surface you have not cureted. It would be a very hard matter to curet the interior of a barrel from the bung hole.

I do not believe in cureting the uterus myself, and have practically quit it. To my mind the only condition where a curetment is indicated is for the removal of pieces of membrane and debris after a miscarriage or abortion; and I usually do that with forceps, and then swab the uterus out with a piece of dry gauze. I do not think we gain anything by cureting the uterus in so-called chronic endometritis and diseases of that kind.

Dr. Gray, Little Rock: I believe a great many mistakes are made in treating gonorrheal endometritis, more perhaps than almost any other kind of curetment. Our patient comes to us with a discharge. It does not look like a gonorrheal discharge, but you assume that it is a chronic condition, because it is continuous. You are afraid to

go in there and curet that uterus when in fact it is a gonorrheal endometritis. I think more of them ought to be examined with a microscope.

Another condition worthy of note in cureting the uterus is the fact that pus tubes are hard to find. I remember about a year or so ago I cureted a uterus. The patient came to my office. I put her on the table and made examination. She had a discharge, but I did not examine it microscopically. She had a pus tube that adhered to the posterior endometrium. It was impossible for me to find it in that uterus with my fingers. I sent her to the infirmary and after cureting, her temperature immediately went up, I did not find that tube. If I had anesthetized her I would have found that tube.

There are too many surgeons who are prone to grasp the upper portion of the uterus with the forceps and pull down on it, and that is always more or less tender, and when you pull down it tears out and that makes laceration and scar tissue form there. I always adopt the plan of running a needle and thread through to the middle of the upper lip of the cervix three times above or below and sometimes both, and that holds it. I do not produce laceration.

It is a very simple operation if done right. It ought to be done with just as much regard to asepsis and careful technic as anything else. Many operators leave the tubes in bad condition. I usually remove the gauze in about twelve hours after the operation.

Usually there will be a flow of urine in twelve hours after an operation. I would never catheterize a patient. It is better to turn them over on their belly to pass their water. It will not hurt them. You usually complicate things very much if you attempt to catheterize them. I give them a vaginal bichloride douche, of 1 to 4,000 or 5,000 twice a day.

Dr. Gibson, Little Rock: I simply rise for the purpose of endorsing the remarks of Dr. Snodgrass and to emphasize every word that he says. I do not know of any operation that is productive of more bad results than can arise from a curetage improperly done. I have not only endeavored to curet the uterus of a cadaver a dozen times, but have held one up in my hand after removing it, and cureted it as thoroughly as I could, split it open and examined it, after

having done the best I could, and I have never yet been successful in doing a thorough curetment on a cadaver with the most skillful manipulation of which I was capable. Yet we often hear practitioners assert that it is one of the simplest of the simple operations! I believe it is fraught with more harm in the hands of the general manipulator than any other operation of modern times. I would judge a man more by the skill with which he performed a curetage than I would by the way he performed an abdominal operation. It requires the most exquisite sense of touch; it requires the utmost skill to do it properly, and if it is not done properly, I protest that it should not be done at all.

Dr. H. H. Kirby, Little Rock: I do not agree with my friend, Dr. Gibson. I for one believe that you should curet when indicated. The doctor did not say that there should be complete removal of the endometrium. He did not want to produce complete removal of the endometrium; if there were we should have only a scar tissue remaining, because the deeper layers of the endometrium are composed almost entirely of connective tissue and when we get into this deeper, thicker portion of the lining we find the ends of the glands of the uterus, and if we were to remove all of this tissue then there would remain only muscular tissue and connective tissue, which we all know.

The only thing with which I take issue with Dr. Saxon is the use of the sharp curet. I believe that a sharp curet is entirely unnecessary. A dull curet will remove all the diseased tissue necessary and there is less danger of penetration of the uterine wall, and, too, there is no possibility of complete or excessive removal of the endometrium. I believe with these two exceptions the paper is in every way a good essay bearing on this subject.

Dr. Saxon: I have enjoyed the discussion very much. There is one point urged which I would like to controvert. Dr. Snodgrass, I believe, said there was no need to attempt to protect the hymen of a virgin. I think that shows an unusual lack of interest in the welfare of your patient. Why should we debate the question of methods in cases of this kind?

As regards the removal of some of the debris that may be there by a simple operation that might be performed and our patient ben-

efted. Why should we allow it to remain there for months—even years, sometimes—to undergo absorption and acting as foreign material, when we could simply remove it with a curet? Of course, I do not pretend to argue that we do “fail to make good” in many cases, and sometimes do much harm.

I wish to say this as to the curetment of a cadaver uterus, which Dr. Snodgrass and Dr. Gibson speak of. It is quite different with the uterus of a live person. The uterus of the cadaver is simply a hard substance; has no flexibility at all. It would be much harder to operate on them than on the live uterus. There is no point made in such a comparison.

If you scrape around the cervix of a cadaver with an instrument or with your finger nails or forceps there would be some crevices that would not give when you get in there and some tissue would be left in patches. It is different when the patient is alive. There isn't the same condition at all in a cadaver as there is in the live subject.

NEURASTHENIA AND PSYCHASTHENIA, A DIFFERENCE.

By S. T. Rucker, M. D.,
Memphis, Tenn.

Many symptom complexes and nervous phenomena that are not readily defined are classed as neurasthenia, when a close observation and careful study of the symptoms presented would reveal a distinctive difference.

Until recently psychasthenia has been classified and treated as neurasthenia. Some observers, however, called psychasthenia “borderland cases of neurasthenia,” because the symptom complex was not typical of neurasthenia, nor could it be classed as a psychosis like melancholia.

I will tabulate below the chief diagnostic symptoms of neurasthenia and psychasthenia.

NEURASTHENIA.

- (1) Physical health and bodily strength often depreciated.
- (2) Gastro-intestinal disturbance with some emaciation.
- (3) Muscular weakness and chronic symptoms of fatigue.

PSYCHASTHENIA.

- (1) Physical health good, as a rule.
- (2) No gastro-intestinal disturbance. Appetite and digestion good.
- (3) Muscular strength and no symptoms of fatigue.

(4) A state of nervous weakness with inability to sustain continued effort.

(5) More or less disturbance of circulation.

(6) Insomnia a constant and annoying symptom.

(7) Headache and many vague nervous pains.

(8) Doubts and fears vary and change.

(4) No nervous or physical weakness, but a morbid fear of becoming weak.

(5) Circulation good and blood pressure normal.

(6) Sleeps well.

(7) No headache and seldom complain of any pain.

(8) Fears fixed and constant.

Some symptoms common to both disorders are a lack of confidence, a weak will, imperative ideas, anxiety, doubts, fears and morbid apprehension.

A brief report of some psychasthenia patients will serve to further emphasize its distinctive difference from neurasthenia.

(1) A female patient, age 26 years, weight 137 pounds. Father living, in good health. Mother suffered from hysteria for ten years; finally made a good recovery. One brother was treated for neurasthenia.

Examination showed physical health good and reflexes normal. Ate and slept well. For five years she had been confined to her room and treated as a nervous invalid. The chief symptom observed was a morbid and constant fear of “having a spell.” She had never had a spell, nor could she describe the kind of spell she feared. She could not be induced to leave her room alone, for fear of “having a spell,” and not be able to return.

The trouble yielded promptly to psychotherapy and in less time than a month she would go out alone anywhere she desired to go.

(2) A male patient, age 28 years, weight 275 pounds; physical health good, ate and slept well. Six years previous he had a nervous breakdown, from overwork as a pharmacist. The neurasthenic attack lasted two years, when it merged into psychasthenia, with rapid increase in flesh and bodily strength; but he remained an invalid more helpless than before.

The chief symptoms present were a “fear of getting weak,” and that he might “topple over and die.” He was more or less bedridden for four years, before being sent to me. He was brought in an ambulance, lying on his back, and would not move a muscle, for fear of “getting weak,” etc. At times he had to be fed with a spoon, as he could

not be induced to move his hands. His fears were an obsession, fixed and constant.

Recovery was slow and tedious. The vicious circle of thinking had to be broken, the fixed fears gradually dissipated and confidence and will re-educated. However, he made a good recovery in twelve months and resumed his business as druggist.

(3) A male patient, age 26 years, weight 140 pounds; health good, ate and slept well. Four years previous he had a nervous breakdown, from which he recovered and returned to his work. Present trouble began two months previous to my seeing him, while at work in his office. He noticed he had an inclination to stare at things and a torturing

"fear of being injured." While eating, the sight of tableware would suggest the idea that he had "swallowed a tumbler or knife." Seeing a dog would leave the impression that he had been bitten. If he touched anything it had, in some way, injured him. He could not get away from the fear of being injured by something.

He recovered in four months by the use of psychotherapy. The treatment of nervous disorders like neurasthenia and hysteria requires such measures as diet, baths, electricity, massage, drugs, etc., to invigorate and restore bodily health, while the treatment of psychasthenia is dependent largely on the use of psychotherapy.

DON'T FORGET THE DATE

Monday Morning, May 13

Meeting of the House of Delegates. Every Delegate is duty bound to be present, else his County Society will not be represented.

THE JOURNAL

OF THE

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All communications to this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the State. Notice of deaths, removals from the State, changes of location, etc., are requested.

ADVERTISING RATES.

A schedule of rates will be furnished upon request.

CHANGE OF ADDRESS.

Change of address will be made if the old as well as the new address be given.

ANONYMOUS COMMUNICATIONS.

No anonymous communications will appear in the columns of this Journal, no matter how meritorious they may be.

NOTICE.

All changes of address should be sent to Dr. C. P. Meriwether, secretary of the State Society, as he furnishes the mailing list each month of our members. All communications for publication should be sent to the editor not later than the 5th of each month.

Editorials.

Doctor, DO THIS NOW. Secure an interview with your candidates for the legislature and make them promise, if elected, to support all bills pertaining to the betterment of public health and advancement of medical science.

ST. LUKE'S HOSPITAL.

One of the most modern and beautifully equipped hospitals in the whole South is now located on the corner of Twentieth Street and Schiller Avenue, Little Rock, Ark.

Not only does this modern institution stand as a mark for the achievements of its founder, but as one of the most beneficent institutions ever afforded the city of Little Rock. There are quite a number of smaller yet well-equipped private hospitals throughout the State of Arkansas, but owing to the hospital facilities offered by the city of Little Rock, it was only recently that Drs. Runyan

and Shinault realized the importance and necessity of a private hospital for their surgical and gynecological cases.

Dr. Runyan has for a number of years been looking forward to the building and equipping of a modern institution of this kind, and has consequently made special study and taken notes from the most up-to-date hospitals in this country and Europe. After his investigation and study in this way he was naturally prepared to build an institution which would not only stand as a monument to his name, but would receive compliments from the most noted surgeons who might have occasion to visit the "St. Luke's" of Little Rock.

There are apparently many advantages to be had in a hospital with a limited amount of space. St. Luke's hospital is a one-story brick, making it virtually a fire-proof building. It is heated with steam, using natural gas as a fuel. It has the automatic heat regulator in each room, making it convenient to have an even and fixed temperature in individual rooms without interfering with the heat in other parts of the building. There is also a private telephone in each room, with extensions to the beds, making it convenient for the patient to have the advantage of the telephone at all times.

The operating and sterilizing rooms are tile throughout, with the most modern operating equipments. The kitchen has tile flooring and four feet of tile wainscoting. The bath room is tile and marble throughout.

Dr. Runyan is receiving many compliments and is to be congratulated for the exercising of good judgment in every particular.

BANQUET UNION COUNTY MEDICAL SOCIETY.

The annual banquet of the Union County Medical Society was given at the Garrett Hotel, El Dorado, on the evening of February 5.

In addition to the members of the society, there were present a number of physicians from over the State and the representative druggists, lawyers and bankers of El Dorado.

Through the liberal hospitality of the Union County Medical Society and the efficient services of the Garrett Hotel the guests were

most highly entertained and the banquet was in all one of the most elaborate affairs of its nature ever held in El Dorado.

Dr. R. A. Hilton, chairman of the council of the Arkansas Medical Society, presided as toastmaster. The usual good spirit of the members of the society mingled with that of their business associates and guests, spiced just a little now and then with the sparkling burgandy and the ginger and witticisms of those who responded to toasts, made this one of the most eventful occasions of the season.

Among those who responded to toasts were Drs. S. J. McGraw, J. P. Runyan, J. B. Wharton, H. H. Niehuss, J. G. Mitchell, W. R. Bathurst and S. E. Thompson. Specially did Dr. Bathurst's toast add considerably to the enjoyment of the banquet, as his subject was "All I Want Is a Little Bit Off the Top." Dr. Bathurst adhered strictly to the top, and were it possible to obtain a copy of his toast we would gladly publish the same to show that it is possible to treat the top (the skin) without infringing on the rights of the doctor, who makes a specialty of treating the top (the skin) and the underlying structure.

One of the greatest tributes paid to the physician's life was the toast on "Light and Shadow of a Doctor's Life," delivered in the most eloquent terms by the able and distinguished after-dinner speaker, Dr. S. E. Thompson, a copy of which we are glad to be able to present as follows:

"THE LIGHTS AND SHADOWS OF A DOCTOR'S LIFE.
"Toastmaster and Gentlemen:

"I presume that a doctor is the only one who could consistently and feelingly respond to this toast; he is the only one to whose eyes the softest gleams of life appear and the most somber shadows are shown. The unusual and confidential relationship of his life's work is such that the most brilliant lights and the darkest shadows are shut in from the outside world and are treasured or regretted only in the closest recesses of his own heart.

"The first light that appears on the threshold of a doctor's life is when his mind and his heart are lit up by the ambition to enter the grandest profession on the face of the earth and to stand before its ranks the

peer of any of its devotees. To know that in his brain he is to carry an oil for every wound and an anodyne for every pain. That his mission is to be that of the good Samaritan, to minister unto the sick, to aid the wounded and to soothe the dying.

"Then the lights of his actual work. When these lights spread out their beauties before him, he feels that he is standing in the first burst of life's summer, where the meadows are glowing and sparkling with flowers of every hue; he feels that he is in a land where the roses always bloom, the jasmine never dies and the song birds forever sing. He is in the very effulgence of his professional life. He sees the young mother who for the first time he has piloted through that dreaded period and soothed her pain through its closing ordeal. He sees that ineffable maternal light that brightens her eyes and allumes her cheek when she listens to the first cry of the first born; he feels the warmth of her everlasting gratitude and confidence. And later, when the members of this same family are prostrated and trembling under the burdens of disease, he goes again into the light of their love as he restores the afflicted to health and strength.

"Then he goes to the widow's hut without money and without price, and wrestles with sickness and disease and snatches her loved ones from the clutches of death and restores them again to her arms; then it is that he feels in the consciousness of duty done the most precious light that spreads its rays over a doctor's life.

"And after the producing period of his life has passed away and his vigor has been spent, he should find himself in the possession of a modern home, with a bank account sufficient to meet the needs of his declining years, surrounded by a loving family and treasured friends, he can look back and say:

" 'I shot an arrow into the air,
It fell to the ground, I knew not where,
I breathed a song upon the air,
It fell to the ground, I knew not where.
Long years afterward in an oak,
I found that arrow still unbroke,
And the song from beginning to end
I found again in the heart of a friend.'

"But, true to every phase of life, the shadows must come; man's inhumanity to man makes countless shadows fly. The doctor goes through the darkest of the night

and the wildest of the storm when he is exhausted in body and tired in brain, to attend the sick and suffering family, and after he has restored them to health he receives only the man's ingratitude for his pay, and his eternal enmity if he forces the collection of his bill.

"He watches and labors by the sick bed of his best friend's baby; he sees the mute prayer in the fond mother's eyes as she appeals to him to save her idol; he fights the disease with the valor of a hero, using every method which scientific medicine has evolved, only to find in the end that the spirit of death has defeated his skill. The darkest shadow in a doctor's life.

"And after he has passed the meridian of life, and is slowly but surely winding his way down its western slope, and after the unrelenting hand of time has whitened his locks, furrowed his cheeks and weakened his frame, he turns sadly, looks back down the dim corridors of the past, and if, as is too often the rule, he has failed to demand that which was justly his own and finds himself with the bare pittance with which to meet the demands of his closing years that the ones for whom he did the most have only pity to give, he finds that the favors and friendship he gave in the strength and ruggedness of his young manhood gives nothing in return; then it is that we hear him cry:

"What is friendship but a name,
A charm that loves to sleep,
A shade that follows wealth and fame
And leaves the wretch to weep."

"The blackest shadow that spreads its wings over a doctor's life."

BETTER ATTENDANCE.

Possibly the weakest link in the chain of organized medicine is the lack of attendance of the members in the county society. I do not believe it possible to have a thorough and efficient State organization without first having an efficient county organization, which can only be accomplished by a better attendance by its members, a higher degree of enthusiasm and consequently much more real hard-down thinking.

In a recent letter written by Dr. Etta Charles of Summitville, Ind., to the members of the Madison County Medical Society, she

treats this subject with a great deal of truth and her remarks could be as appropriately applied to the conditions in the majority of the counties in our State. Dr. Etta Charles is a sister of Dr. Olive Wilson of Paragould, who is known by the Arkansas Medical Society to be one of our most efficient co-workers in organized medicine. Believing that Dr. Charles' letter will not only be interesting, but instructive as well, I am taking the liberty of quoting the same, which reads as follows:

"Summitville, Ind., Jan. 30, 1912.

"Dear Doctor—It has been said that the man who does not attend his medical society vegetates. To vegetate means the lowest order of growth. The word expresses too much activity. He hibernates.

"God pity the patient whose physician hibernates in his office. The mortality in Madison county is a disgrace to the medical profession. At a meeting of the medical society one of the members dropped in on the tail-end of the last paper. He came in to pay his dues. Let me say here that that was better than many other members have done for years, for they send their dues by mail. When it came to the discussion he did not take part because he had not heard the paper, but arose at its conclusion to ask a question. That question showed him four years behind the times, yet he is an active practitioner. Who suffers when a doctor falls behind in progressive work? The patient's life is just as sweet to him and those who love him as the doctor's is to him. He has a right to expect his physician to keep up with the ever-moving medical profession. Who among you would employ a physician one year behind the times if he knew it? Not one.

Your medical society is the only place you can go frequently, and by placing your cases before the society if you have them to report, if not listen to those who have and gain something, be it ever so little. If a patient goes into a doctor's office suffering with a malady the doctor never heard of, would it not be a case of the blind leading the blind if he tried to treat him? Let us not scourge the quacks until we clear our own skirts. How much can a physician be benefited who has to call a hibernating doctor in consultation? How much better off is

the patient if you send him to a hibernating specialist?

"To fail to attend three or four meetings of your society in a year is excusable, but to stay away year after year, yet allowing your name to appear as a member, looks hibernating.

"Doctor, come out of your hibernating hole if you only take a club and clean up the bunch. Do something to show this society you are not dead. Fraternally,

"Etta Charles, Sec.,

"Madison County Medical Society."

STATE CHARITY HOSPITAL.

Within the past twelve months the medical profession of the State has been successful in bringing about a merger of the two medical colleges which formerly existed in Little Rock and in the securing of an act in the legislature causing this State to take over the new medical college and create a medical department in the University of Arkansas.

This was indeed one of the greatest steps ever taken in this State for the advancement of medical science.

Our State is entitled to as good a medical college as any State in the South, and no doubt the ambition of our citizens is that no efforts be spared to place our college within the ranks of those of the highest standard. Under the rules governing management, equipment, etc., of modern medical colleges it is impossible to conduct an ideal medical college without the necessary hospital advantages. We have in Little Rock the Pulaski County Hospital, State Hospital for Nervous Diseases, State Institution for the deaf, mute and blind, but as yet no steps have been taken toward the securing of a State Charity Hospital.

The State of Oklahoma, which has so recently become a State, has already taken these necessary steps and on December 17 opened its State Charity Hospital with the capacity of sixty-four beds, private rooms with bath, pay and free ward for both white and colored patients, and has placed this hospital under the sole control of the faculty of the medical college.

A pitiful sight it would be were we to have submitted to us the real conditions in our State with reference to the need of a State Charity Hospital for the care of even

the surgical patients who are now only lingering, longing and suffering, waiting for relief through the grim reaper DEATH.

Department of Medical Jurisprudence.

PHYSICIANS' RIGHT TO COMPENSATION.

By Hon. R. L. Floyd,
Little Rock, Ark.

Under the common law of England a physician had no legal means of compelling payment for his services, but the rule has been changed by statute in that country and was never recognized in this country.

The employment of a physician or surgeon implies an agreement to pay him what his services are reasonably worth. He may also recover for the services of such assistants as he may require in the discharge of his duties.

Where the law makes it a criminal offense to practice without license, as in this State, an unlicensed physician cannot recover for services he may render as a physician, although he may recover for services rendered as an attendant under the directions of a licensed physician who has charge of the case.

A nonresident physician must comply with local practice acts, except where he acts in an emergency, to avoid criminal liability and loss of right to compensation.

The right to compensation does not depend upon the result of the treatment in the absence of a special agreement to that effect, the physician having properly discharged his duties in the case.

If the physician has agreed to perform services gratuitously he is bound by that agreement, but he is not bound by an unexpressed intention to render his services as an act of charity.

"Where a physician renders services upon an understanding between the parties that he was to be remunerated by a legacy, this amounts to an agreement that he was to make no charge; but if the services are performed under the mere expectation of a legacy, the physician is entitled, on being disappointed in his expectation, to recover compensation therefor."

Where a physician has entered into a "no cure no pay" contract, he is bound by it. To recover he must show a cure, but a recurrence of the same disease does not bar recovery if a cure was fairly effected under the contract. If the patient does not comply with his part of the contract he is liable for the agreed compensation.

The patient is liable for the physician's services when he employs him or consents that he render the services. Where services are rendered in an emergency that prevents an agreement or consent of the patient, the patient is liable.

One who acts merely as a messenger or agent of the patient in calling in a physician is not liable to the physician for his services. If, however, he fails to disclose that he is only a messenger or agent, he may become liable personally.

"If one engages a physician to attend an urgent case, and makes no limitations as to time, he is liable to such physician for all subsequent visits until his services are dispensed with." This is also true, of course, in cases that are not of an emergency character.

In arriving at the amount of compensation that a physician is entitled to recover where there has been no express contract, the "customary charges of physicians for like services in the same locality or neighborhood may be shown."

The nature of the disease or injury, the professional standing of the physician and his skill and learning are elements to be considered in arriving at the amount. But the physician's daily income or loss of other practice are not proper elements for consideration unless the exclusive services of the physician were contracted for.

Whether or not the financial condition of the patient may be considered is a question that the legal authorities are in conflict upon and the writer will treat it more fully at another time.

Personal Mention.

Our worthy president, Dr. Morgan Smith, is in New York attending clinics.

Dr. L. R. Ellis of Hot Springs was in Little Rock recently on professional duties.

Dr. R. C. Shinault has returned from a short visit to Hot Springs.

Dr. H. A. Murphy, formerly of Wesson, has moved to El Dorado.

Dr. R. E. Rowland of Huttig is preparing to move to Arkansas City.

Dr. F. T. Murphy, secretary of the State Board of Medical Examiners, was a recent visitor to Little Rock.

Dr. E. E. Barlow was in the city recently and informs us that he is making special efforts to secure a hospital at Dermott.

Dr. Robert Caldwell attended the recent meeting of the Southern Section of the American Eye, Ear, Nose and Throat Society at New Orleans.

Dr. C. S. Holt of Fort Smith spent several days in Little Rock, giving a course of instructions on operative surgery in the Medical Department of the University of Arkansas.

We are glad to note the recovery of Dr. M. L. Norwood of Lockesburg, who was recently operated on for appendicitis. Dr. Norwood was the first patient to enter St. Luke's Hospital; however, we hope this was not what prompted him to have the operation.

County Societies.

GARLAND COUNTY.

RESOLUTION.

Whereas, at a special meeting of the Garland County Hot Springs Medical Society, at which the entire medical profession of this city, by invitation, participated.

Whereas, we, the committee appointed by those assembled this, the 19th day of January, 1912, having heard with sorrow of the unexpected demise of our beloved and esteemed co-worker, Gilbert Christian Greenway; and

Whereas, this body and the profession at large have always held him in the highest respect as to his social, scholarly and professional attainments; therefore, be it

Resolved, That this resolution is an expression of our deep sorrow and that it be presented to the members of the bereaved family; and further be it

Resolved, That a copy be spread upon the minutes of the Garland County Hot Springs Medical Society, and also be fur-

nished the medical and secular press of our country.

Howard P. Collings,
J. C. Minor,
P. J. Vanglear,
E. C. Hay,
N. M. Hallock.

Hot Springs, Ark., January 20, 1912.

Dr. J. S. Wood, Secretary Garland County Medical Society:

Dear Sir—We, the undersigned Special Committee on Neerology, have the honor to make the following report in compliance with the wishes of the entire medical profession of Hot Springs assembled in your halls on the night of the 19th.

We obtained from the Johnson Floral Company a floral tribute to the memory of our late co-worker, Gilbert Christian Greenway. With the enclosed note the same was forwarded to Mrs. Greenway by special messenger.

Respectfully,

J. C. Minor,
P. T. Vaughan.

“Dear Mrs. Greenway—In your bereavement let these little messengers whisper to you the profound grief of the entire medical faculty of Hot Springs, who, in meeting assembled last evening, conferred on us the honor of representing them.

“J. C. Minor,
“P. T. Vaughan.”

Washington County.—The Washington County Medical Society met in quarterly session at Fayetteville, January 2, with President P. L. Hathcock presiding. In the absence of the secretary, Dr. H. D. Wood was appointed secretary pro tem.

Drs. D. Christian, R. R. Dinwiddie, E. F. Ellis, A. S. Gregg, W. T. Galbert, P. L. Hathcock, Phoebe Liniger, J. E. Martin, Otey Miller, C. F. Perken, W. B. Black, H. D. Wood, W. N. Yates and F. B. Young were present.

Dr. Gregg read a paper on “Intestinal Obstruction,” which was a very interesting paper and created an enthusiastic discussion, and Dr. Phoebe Liniger on “The Prevention and Treatment of the Abortion.” This was a very creditable paper, and discussed by Martin, Yates, Young, Welch and Wood.

Dr. H. H. Fowler presented a paper on “Emesis.” Dr. H. H. Fowler’s application for membership was read by the secretary

and referred to the Committee on Credentials.

Dr. Bearden’s application for reinstatement after a year’s absence from the society was read and acted on favorably.

Dr. Yates reported a communication from Dr. C. P. Meriwether, stating that Dr. Joseph H. McCormick of Bolling Green, Ky., would be with us on February 27, but a later communication from Dr. Meriwether states that Dr. McCormick was compelled to make some changes in his dates and could not be with us in February. The society regrets very much the inability of Dr. McCormick to be present on the date mentioned and sincerely hopes he will visit the society in the near future.

The president appointed Drs. H. D. Wood and F. B. Young to communicate with our representatives in Congress and urge them to use their influence for the passage of the Owen Public Health Bill.

The following officers were elected for the ensuing year: A. S. Gregg, president; J. E. Martin, vice president; Nina V. Harden, secretary, and H. D. Wood, treasurer.

The next meeting will be held at Fayetteville on April 2. The third quarterly meeting, which will be held on July 2, will be the fortieth (40th) anniversary of the Washington County Medical Society. It is hoped that the society will celebrate this anniversary with the degree of enthusiasm and interest that the occasion warrants. Ways and means of doing this are now being discussed, and it is hoped that the entire membership, present and past, will become enthusiastic on the subject. We hope to celebrate the grandest reunion in the history of the society.

Drs. W. B. Welch and W. D. Wood of this county and John N. Lacey of Los Angeles, Cal., are the only surviving charter members.

Nina V. Harden, Sec.

Drew County.—The Drew County Medical Society held its regular annual meeting in January and elected the following officers for the ensuing year: President, S. Harris, Wilmar; vice president, M. B. Corrigan, Monticello; secretary and treasurer, W. A. Brown, Monticello.

W. A. Brown, Secretary.

Benton County.—The Benton County Medical Society held its regular annual meeting at Rogers on December 12, with the following members present: Charles H. Cargile, T. M. Rice, E. E. Pickens, C. A. Rice, R. S. Rice, J. A. Fergus, also the following visiting physicians: Drs. Young and Parkens of Springdale.

The following officers were elected for the ensuing year: President, R. S. Rice, Rogers; vice president, J. R. Cleag, Siloam Springs; secretary and treasurer, J. A. Fergus, Rogers; delegate to the State Medical Society, E. E. Pickens, Rogers; alternate, Charles H. Cargile, Bentonville.

J. A. Fergus, Secretary.

Union County.—The Union County Medical Society, at its December meeting, held its annual election of officers as follows: President, F. O. Mahony; vice president, J. B. Wharton; secretary and treasurer, J. G. Mitchell; delegate to the State Medical Society, R. E. Rowland.

The discussion of methods of how to increase the attendance at the meetings of the society was dealt with at length. It was decided to have the annual banquet following the regular meeting in February. The president and secretary were made a committee of two to invite each doctor in the county to the banquet and urge his attendance, also to invite a number of guests to be present at the afternoon meeting and at the banquet. Drs. Hilton and Wharton were appointed on Committee of Arrangements.

The January meeting was well attended and a very interesting program rendered. A committee of four were appointed to arrange and provide a new set of by-laws for the society, to be submitted at the next meeting. A motion was also made and unanimously carried that in the absence of any member who was expected to read a paper or conduct a quiz at such monthly meeting without a plausible excuse, such member would be assessed fifty (50) cents for each offense.

On February 5 the society met in regular session at the Garrett Hotel at El Dorado. President Mahony being absent on account of illness in his family, J. B. Wharton, vice president, called the meeting to order. The general routine of the work was dispensed

with and the courtesies of the floor were extended to the visiting physicians, Drs. J. P. Runyan, W. R. Bathurst and H. H. Niehuss of Little Rock.

Dr. Runyan dealt very thoroughly with matters of interest pertaining to the "Special Conditions Connected With Organized Medicine in This State." Dr. Bathurst in a brief way gave account of the progress of the medical department of the University of Arkansas, of which he is secretary, and laid special stress on the necessity of State Charity Hospital in connection with the medical department of the university. Dr. Bathurst also, at the request of Dr. S. E. Thompson, gave his view of the virtues of "606," stating that its efficiency was yet to uncertain to be depended on to the extent that it is recommended by its strongest advocates. Dr. Thompson made mention of his having given much study to the experiments and uses of "606" in New Orleans and other places, and stated that he had the highest regard for its efficiency and believed that it might be used in all stages of syphilis.

Dr. Niehuss, editor of the Journal of the Arkansas Medical Society, spoke with much enthusiasm of the anticipated success of the next annual meeting of the State Society at Hot Springs and of the special effort which he is making to have the "Hot Springs Number" of the Journal one of special interest, and also stated that this number would be mailed to every registered physician in the State.

Dr. Hilton, chairman of the Council of the Arkansas Medical Society, dealt very ably with the question of abolishing quackery and patent medicine vendors in the State. He is making special effort to have every county society begin their legislative work at home, first in causing such town ordinances to be passed that would prohibit such quacks and patent medicine vendors from operating in the town; second, to urge every member of the County Medical Society to secure a pledge from every man who is a candidate for the legislature to the effect that he will support any reasonable health bill advocated by the medical profession.

Dr. Wharton gave a very interesting account of the history of the Union County Medical Society from the time of its organization to the present date. Summarizing Dr. Wharton's paper, we have as follows: In

1902 there were eight (8) physicians in Union County who were loyal to the profession, and who in their wisdom foresaw the necessity of, and good to be derived from, organized medicine, met in the courthouse at El Dorado and affected the organization since known as the Union County Medical Society.

It was their aim to have instilled into them a closer relationship and furtherance of fraternal ties and to gain recognition of and become a branch of the Arkansas Medical Society, also to co-operate in every conceivable way with other medical organizations for the advancement of medical science. At this meeting the following officers were elected: President, Morgan Smith; vice president, R. A. Hilton; secretary and treasurer, J. B. Wharton; delegate to the State Society, Morgan Smith.

Application was immediately made to the State Society for a charter, which was very promptly granted, and the society has since been in affiliation with the State organization and has ever been active in all movements for the betterment of organized medicine.

The officers elected annually from the date of organization to the present were as follows:

In 1902—President, Morgan Smith; vice president, R. A. Hilton; secretary and treasurer, J. B. Wharton; delegate to the State Medical Society, Morgan Smith.

In 1903—President, R. A. Hilton; vice president, J. B. Wharton; secretary and treasurer, J. M. Sheppard; delegate to the State Society, R. A. Hilton.

In 1904—President, J. B. Wharton; vice president, J. M. Sheppard; secretary and treasurer, S. E. Thompson; delegate to the State Society, R. A. Hilton.

In 1905—President, John M. Moore; vice president, William Sellars; secretary and treasurer, J. M. Rushing; delegate to the State Society, H. H. Niehuss.

In 1906—President, William Sellars; vice president, L. L. Purrifoy; secretary and treasurer, H. E. Mackey; delegate to the State Society, H. H. Niehuss.

In 1907—President, H. H. Niehuss; vice president, J. M. Sheppard; secretary and treasurer, C. S. Pettus; delegate to the State Society, John M. Moore.

In 1908—President, J. M. Sheppard; vice president, S. E. Thompson; secretary and treasurer, H. A. Murphy; delegate to the State Society, L. L. Purrifoy.

In 1909—President, J. M. Sheppard; vice president, E. P. Vines; secretary and treasurer, J. B. Wharton; delegate to the State Society, L. L. Purrifoy.

In 1910—President, L. L. Purrifoy; vice president, C. S. Pettus; secretary and treasurer, J. B. Wharton; delegate to the State Society, R. A. Hilton.

In 1911—President, S. E. Thompson; vice president, George Murphy; secretary and treasurer, F. O. Mahony; delegate to the State Society, R. A. Hilton.

In 1912—President, F. O. Mahony; vice president, J. B. Wharton; secretary and treasurer, J. G. Mitchell; delegate to the State Society, E. R. Rowland.

In 1909, at the meeting of the State Medical Society at Pine Bluff, H. H. Niehuss was elected councillor for two years for the Fifth District. In 1911, at the annual meeting of the State Medical Society at Fort Smith, Dr. R. A. Hilton was elected councillor for the Fifth District, and at the meeting of the council was elected chairman of that body.

Early in the history of the society the regular monthly meeting date was set for the first Monday in each month, and has since been the regular meeting date. The society has had a steady growth in both interest and number of members, and, in fact, up to 1907 the society had at all its regular meetings from one to three papers read by members appointed at the previous meeting. From the study given these papers by the contributors and the valuable and instructive discussions brought out, the society was in a great measure a school of instruction for its members.

The society also watched very closely the ethics of the profession and its members were ever ready to take cognizance of any violations of the same.

The Union County Medical Society has always been active in encouraging and promoting health measures which would seem in the least advantageous for the citizens of the county. Its delegates have always attended the annual meeting of the State Medical Society and fought with much zeal and energy for the betterment of the organiza-

tion and for such measures as would enable organized medicine to influence the members of the legislature for the passage of better health laws. We are proud to recall that the charter member and first president of our society, Dr. Morgan Smith, now stands at the head of the State Medical Society and is secretary of the State Board of Health. He has probably done more for organized medicine and for the betterment of public health in the State than any other man in this age. We also note with pride the fact that another one of our charter members, Dr. R. A. Hilton, is now chairman of the council of the Arkansas Medical Society and is indeed an active and efficient worker in the interests of medical science and organized medicine.

At the meeting in March, 1907, the society adopted the system of quizzes, which had been followed by a number of counties in Kentucky and other States with a great deal of success. This system has been adhered to since that date and has proven a very efficient plan, and has, no doubt, added to the interests of the society, as well as having benefited the members from an instructive standpoint. The society has also in recent years kept a delinquent list of patrons, a copy of which is mailed to each member monthly, which plan has resulted in a much improved condition from a remunerative standpoint.

In 1905 the society took up the question of medical fees allowed by "Old Line" Life Insurance Companies for examinations made by them, and the entire membership, after some discussion, decided that the minimum charges for such services should be \$5.00, and the members of the society have since adhered to this belief and acted accordingly. This is rather a delicate matter to handle, but we can frankly say that in Union County we have had no trouble in securing the \$5.00 fee which we earnestly believe is nominal and should be demanded by every competent physician making examinations for insurance.

The society has, since its organization, always met at El Dorado, with the exception of one time, when Dr. William Sellers of Junction City was president, and complimentary to his enthusiastic and able services as president, met at his home town, Junction City.

J. G. Mitchell, Secretary.

Woodruff County.—The Woodruff County Medical Society met in regular session at Augusta, February 14, at 1:30 p. m., Dr. R. Q. Patterson, president, in the chair. The following members were present: Dr. R. Q. Patterson, Dr. B. A. Fletcher, Dr. E. F. Brewer, Dr. R. N. Smith, C. E. Dungan, J. M. Jernigan and L. E. Biles. A very interesting meeting was held and the following resolutions adopted:

Whereas, We, the members of the Woodruff County Medical Society keenly feel and deeply realize that the dignity of the profession is not maintained, nor can it be, by the neglect and nonpayment of services rendered; therefore, be it

Resolved, First, to furnish each physician with a list of those deadbeats who, after a reasonable length of time has passed, have failed to make satisfactory settlement with former physician who did his work during 1911.

Second, that each of us be required to carry a list of those who have failed to settle for their bills, and to consult this when called on to visit or otherwise attend a new patron, and, if his name is found on the list, withhold medical attention until such bill has been settled.

Third, that no doctor take contract for the entire practice of a farm or plantation, with the landlord, and in event landlord collects or assists in the collection of a bill, he not be allowed over ten per cent for same.

Fourth, that there be a list of those who are considered honest, yet unable to pay their former bills, this to be known as the charity list. When a doctor attends one of these and collects anything he is to divide with their former creditors.

Fifth, That no doctor be allowed to solicit practice or cut fees.

Lee E. Biles, Secretary.

Book Reviews.

Diseases of the Stomach, With Special Reference to Treatment.—By Charles D. Aaron, Sc. D., M. D., professor of gastro-enterology and adjunct professor of dietetics in the Detroit College of Medicine; professor of diseases of the stomach and intestines in the Detroit Post-Graduate School of Medicine, etc. Octavo, 555 pages, with 42 illustrations and 21 plates. Cloth, \$4.75 net. Lea & Febiger, Philadelphia and New York, 1911.

In this work the author has endeavored to cover the medical aspects of gastric disorders

in such a manner as to answer the actual needs of the practitioner. Only the useful and suggestive aspects of present knowledge on the subjects are included in the discussion, and every effort has been made to present only practical aspects of the subject. Etiology, symptomatology, pathology and diagnosis are introduced only in so far as they are necessary to an understanding of the methods of the treatment proposed.

The chapter on medication is a very readable one, due attention being given to the use of antilytic serum and bacterial vaccines. This department is a rapidly advancing one, and the author reflects in his discussion of this subject the latest progress. Because of recent discoveries in physiology of digestion, a chapter has been added upon this subject and it is from the viewpoint of the clinician, rather than that of the physiologist that the author lays the greatest stress.

The chapter on examination of the stomach contents includes those tests which will best assist the practitioner in diagnosis and treatment. The neuroses, as related to stomach disorders, have been properly emphasized, and are discussed in their various phases. The author directs attention to the good results which he has obtained in the treatment of gastroparesis by employing the principle of mechanical support. The author has drawn on many American practitioners and foreign writers whose contributions have advanced the many subjects discussed in the book.

There are twenty-three chapters, each one of which is more or less exhaustive of the subjects discussed. Acute and chronic gastritis, motor insufficiency, gastric ulcer, arteriosclerosis and tumors of the stomach are chapters of special interest. We commend the book as reflecting the latest progress and thought in the diseases of the stomach.

The Parasitic Amoebae of Man.—By Charles F. Craig, M. D. The J. B. Lippincott Co., Philadelphia, 1911. Price, \$2.50.

This monograph on the parasitic amoebae of man, by Dr. Charles F. Craig of the U. S. Army Medical Corps, and published under the authority of the Surgeon General of the Army, is a notable contribution to a subject which heretofore has not been too clearly understood. In view of our recent acquisition in the tropics and our rapidly increasing relations with tropical countries, the subject of parasitic amoebae in man has assumed new interest and importance, and this

work is welcomed by all those who have an interest in tropical and semi-tropical diseases.

A detailed description is given of the various species of amoebae parasitic for man, especially as regards morphology, life cycle, method of differentiation, and relation to disease, and everything of value resulting from the investigation of these interesting and important parasites is included. There are many excellent plates used in illustration. The text is clear and every page is read with absorbing interest.

American medicine has been distinctly enriched by the scientific researches and observations of the author. The book should be thoroughly studied by every Southern physician.

W. B. Saunders Company have just issued a new (sixteenth) edition of their illustrated catalog which describes some forty new books and new editions published by them since the issuance of the former edition.

The books listed in this catalog cover every subject of interest to the medical man. The descriptions and illustrations are such as to enable the reader to select easily just the book he wishes on any branch. It is really an index to correct medical literature—an index by which the practitioner, the surgeon and the specialist can acquaint himself with what is new in the literature of his subject.

This edition also contains an illustration and description of Saunders' new building, now being erected on Washington Square, Philadelphia's new publishing center.

Any physician wishing a copy of this handsome catalog can obtain one free by addressing W. B. Saunders Company, 925 Walnut Street, Philadelphia.

Some Clinical Experiences With Hot-Air Treatment.—M. Schaltz, in the *Lancet Clinic*, November 25, 1911, concludes an article on the hot-air treatment as follows.

1. Hot air is a therapeutic agent of great intensity and power of penetration, safe in use, simple of technique and exact in dosage.
2. It has an exquisite and pain relieving property and has the unique power of absorbing and dissolving inflammatory exudates, granulations and adhesions.
3. It should be the method of choice in gonorrheal and chronic rheumatic arthritis, being in the first supplementary to vaccine, in the second to salicylate treatment.
4. It is of extreme efficacy in rheumatic neuralgias and myalgias.
5. It is superior to any other method of treating sprains, bruises and various traumatic affections leading to stiffening and ankylosis.

OFFICERS OF THE AMERICAN MEDICAL ASSOCIATION, 1911-1912.

Next Annual Session, Atlantic City, N. J., June, 1912.

President—John B. Murphy, Chicago.

President-Elect—Abraham Jacobi, New York.

First Vice President—William Jarvis Barlow, Los Angeles.

Second Vice President—F. W. McRae, Atlanta, Ga.

Third Vice President—W. R. Tipton, Las Vegas, N. M.

Fourth Vice President—A. L. Wright, Carroll, Iowa.

Editor and General Manager—George H. Simmons, 535 Dearborn Avenue, Chicago.

Secretary—Alexander R. Craig, 535 Dearborn Avenue, Chicago.

Treasurer—William Allen Pusey, Chicago.

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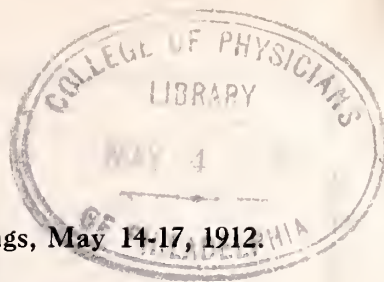
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CONTENTS.

Original Articles.

- Etiology and Pathology of Gall-Stone Disease, by St. Cloud Cooper, M. D., Fort Smith 263
- Symptomatology and Diagnosis of Gall-Bladder Disease, by A. E. Sweatland, M. D., Little Rock..... 264
- The Treatment of Trachoma, by H. Moulton, M. D., Fort Smith..... 267
- Postoperative Ileus—Report of Case Relieved by Intestinal Puncture, by LeRoy Long, M. D., McAlester, Okla..... 270

- Etiology and Treatment of Clinical Manifestations Resulting from Cervical Antelexions, by Chas. S. Holt, M. D., Fort Smith.. 274

Editorials.

- Work for Councilors 278
- The Hot Springs Meeting..... 278

Editorial Clippings.

- Thoremadin—A Typical Nostrum, Put Out Under the Honored Name of Squibb..... 279

Society Reports.

- Johnson County 282

- Book Reviews 282



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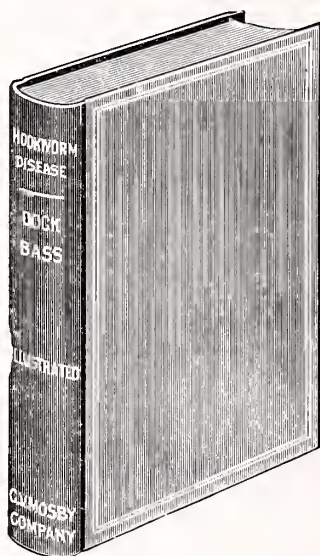
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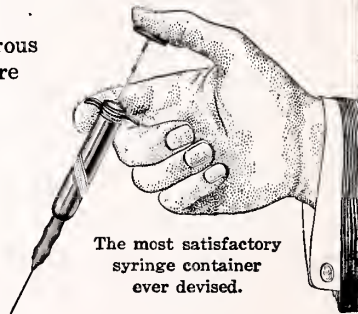
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Original Articles.

ETIOLOGY AND PATHOLOGY OF GALL-STONE DISEASE.*

By St. Cloud Cooper, M. D.,
Fort Smith.

At the request of the chairman of this section, I consented to prepare a paper on the above subject, and after thanking him for the honor of being one of the speakers in this symposium, I began to think about what I could say that would be worth while.

The material for the preparation of this paper has been largely obtained from the current medical literature of the day, as would necessarily be the case with one whose opportunities have been limited to a not very extensive number of cases coming to operation—cases in which the writer was compelled to operate owing to complications which would not admit of delay.

The etiology and pathology of gall-stone disease can be expressed in a few words. Bacteria getting into the gall-bladder is the etiology. Inflammation resulting from the presence of the bacteria is the pathology.

In our study of the diseases of mankind we find that when the individual gets further and further away from nature, that individual becomes subject to various physical infirmities unknown to man in the wild state.

Contributing factors of gall-stone disease are: The artificial life that we lead; eating of improper food at irregular hours; foods rich in sugars; eating too much meat and taking into the stomach more food than is needed; alcoholic drinks and the habit of taking daily cathartics—all disturb the glandular activity of the liver and give rise to disturbed metabolism.

Other contributing factors are sedentary habits, lack of exercise, obesity, tight lacing, pregnancy, heart disease, tumors, looseness of the kidney or liver, enteropostosis, growths in the pancreas and stomach, and puerperal infection—bring about bile stasis and favor infection of gall-bladder by bacteria.

Gall-stones are found in 5 to 10 per cent of subjects dead from all causes. They occur at all ages, 70 per cent of which are found in persons over forty years of age. While more cases are found after the age of forty than at earlier ages, it is not to be supposed that the stones are formed at this time, but rather at this time they begin

*Read before the Thirty-fifth Annual Session of the Arkansas Medical Society, at Fort Smith, May, 1911.

to cause trouble, being formed in early adult life.

Gall-stones are more common in women than in men, the ratio being about five to two.

Gall-stone disease is especially prevalent in temperate climates; it is uncommon in the tropics; meat eaters suffer oftener than carbohydrate eaters.

It has been found by Moynihan and others that 20 to 30 per cent of patients suffering from gall-stones give a history of having had typhoid fever.

Typhoid bacilli have been found in the gall-bladder seventeen years after an attack of typhoid fever.

Bile at one time was thought to inhibit the growth of bacteria; but we now know that when sterile it is favorable to bacterial growth.

Gall-stone disease is often associated with appendicitis.

Pathology.—The starting point in the pathology of this disease is at the time that bacteria get into the gall-bladder; then comes a low grade of inflammation of the gall-bladder from their presence—ulceration and thickening of the mucosa, interfering with the contractile power of the gall-bladder; then comes bile stasis, more infection; bile becomes muddy and thick and formation of stones follow.

Bacillus coli, *bacillus typhosus*, *staphylococcus pyogenes* and *bacillus subtilis* are the bacteria most often found to be the infecting agents.

Infection of the gall-bladder may be by the way of the intestine, but this does not occur unless there is bile stasis; for a free flow of bile would prevent the entrance of germs by the way of the diverticulum of Vater. The duodenum is usually sterile, but may harbor germs when diseased.

The most common way of infection is by the portal circulation. Bacteria carried by portal circulation are ordinarily destroyed in the liver by the bactericidal properties of the liver cells. Bacteria may get into the circulation through the aid of the leukocytes, which are active during digestion.

Infection may occur through the systemic or lymphatic circulation.

Deaver, in speaking of the pathology of gall-stones, says:

"The pathological process may be subdivided into three great classes:

"(1) Those concerning the stones themselves and their mechanical action.

"(2) Those concerning the biliary passages and the liver.

"(3) Those entirely beyond the biliary tract."

Stones may be as large as a walnut and as small as fine sand, and in number from one to hundreds. They have been found in the gall-bladder and in the ducts in almost every combination.

The mechanical action of the biliary calculi is exerted in several ways:

(1) They act as foreign bodies in the gall-bladder.

(2) They may obstruct the flow of bile by lying either in the gall-bladder or cystic duct and causing pressure upon the choledochus, or lying in the choledochus itself.

(3) By pressure upon the pancreatic duct they may obstruct the flow of the pancreatic secretion and cause pancreatitis.

(4) Their motion through the ducts gives rise to biliary colic.

(5) They may cause pressure necrosis of the gall-bladder and ducts, and ulcerate through either into the peritoneal cavity or adjacent organs.

(6) After passage into the intestines they may cause intestinal obstruction.

The complications of gall-stone disease are many, and will not be gone into here.

In closing, I will say that as gall-stones are foreign bodies, they should be removed early—even if but a few symptoms are present, for the pathology of the disease is far advanced when the gall-stones are formed.

SYMPTOMATOLOGY AND DIAGNOSIS OF GALL-BLADDER DISEASE.*

By A. E. Sweatland,
Little Rock.

In discussing this subject it seems necessary to classify disease of the gall-bladder and bile ducts. It is certain that if this is not done we will miss the greater number of our cases that should be treated surgically. As in any disease which is amenable

*Read before the Thirty-fifth Annual Session of the Arkansas Medical Society, at Fort Smith, May, 1911.

to surgery, early diagnosis is of the utmost importance, if we are, through operative procedure, to escape the complications which may arise later, as: Suppurative gall-bladder with perforations and adhesions, stone in hepatic duct and common duct with inflammation of the pancreas, jaundice, carcinoma and death resulting.

In hunting over the literature my attention was directed to the classification given by Kehr, of Halberstadt, on diseases of the biliary passages, and I have thought the subject of sufficient importance to give the salient features of his classification.

(1) Type of Disease.—Stones in the gall-bladder whose walls are but little or not at all changed. The cystic duct is patent. Contents of gall-bladder clear, bile free from virulent bacteria. No adhesions.

Symptoms.—Symptoms are nearly always absent (latent period). Only now and then stomach pain (due to temporary closure of the cystic duct). No jaundice. No stones passed. No enlargement of the liver.

Diagnosis.—Palpation negative, or, at most, slight tenderness in the region of the gall-bladder on bimanual palpation. Often confounded with peptic ulcer, colic, movable kidney, hernia in the linea alba.

(2) Type of Disease.—Acute cholecystitis in a relatively healthy gall-bladder. Ordinarily a large stone is present in the neck of the gall-bladder. The exudate cloudy to purulent. Gall-bladder thickened.

Symptoms.—Tumor of the gall-bladder. Riddell's lobe. Jaundice rare. Severe pain (stomach). Enlargement of the upper part of the abdomen. Marked tenderness in pressure. General condition, if the infection is slight, but little altered. If the infection is severe, much altered. (Cholecystitis acutissima complicated by cholangitis.) Circumscribed peritonitis (pericholecystitis). Fever present or absent. Liver enlarged only when cholangitis coexists. Passage of stones rare. If the cholecystitis ends in the passage of a stone, acute closure of the common duct may occur (9).

Diagnosis.—Diagnosis easy. Confusion with appendicitis is possible, notably if the appendix lies high up in the vicinity of the liver. The diagnosis must determine that the tumor is really the gall-bladder (form, mobility, tension, etc.).

(3) Type of Disease.—Stones in the gall-bladder, already the seat of inflammatory process. Cystic duct patent at the moment. Adhesions between the gall-bladder and neighboring viscera.

Symptoms.—Similar to No. 1. Frequently severe colics, due to angulation of the cystic duct, the gall-bladder being distended. Often accompanied by vomiting and pain on pressure. In the intervals between attacks there may be no symptoms (latent period).

Diagnosis.—Diagnosis similar to No. 1. During the colics a tumor of the gall-bladder may be present when the viscus is still capable of inflammatory dilatation. In the intervals palpation is often quite negative.

(4) Type of Disease.—Acute cholecystitis in a gall-bladder already contracted from numerous attacks of previous inflammation. Cystic duct obliterated or closed by a stone. Many adhesions. Small amount of exudate, mucoid or purulent. Fistulae may exist between the gall-bladder and intestines.

Symptoms.—No palpable tumor, because it lies high up underneath the liver. Pain as in No. 2. More frequent changes in the symptoms. Jaundice rare. When present, a stone has usually passed from the cyst into the common duct.

Diagnosis.—The diagnosis, on account of the negative results of palpation, is difficult. A careful study of the history is the best aid to a diagnosis. When the general infection is severe, purulent cholecystitis without a recognizable tumor, and in the absence of typical colic has often been mistaken for typhoid fever, malaria and sepsis. These forms of gall-stone disease (3 and 4) belong to the chronic relapsing form of cholecystitis.

(5) Type of Disease.—The same as No. 3. No stones, however, are present; merely adhesions.

Symptoms.—Pain upon change of posture, as by standing up; otherwise the same as No. 3. The adhesions may produce pyloric stenosis, dilatation of the stomach, intestinal obstruction.

Diagnosis.—Same as No. 3. After the disease has lasted for some time the general

health suffers severely. Physical signs of a dilated stomach.

(6) Type of Disease.—Hydrops of the gall-bladder. Cystic duct obliterated or closed by stone. Contents of gall-bladder clear, for the most part sterile. Gall-bladder wall as thin as paper.

Symptoms.—There may be no symptoms. The presence of the tumor alone calls the attention of the patient to the fact that something is wrong. In other cases, pain in the stomach. No gall-stones are passed; no jaundice; no enlargement of the liver. Sometimes Redel's tongue-shaped lobe is discoverable. The sterile contents of the gall-bladder may become infected at any time: hematogenous infection is also possible.

Diagnosis.—Diagnosis is simple. Care must be taken not to confuse the condition with movable kidney. If there are no adhesions the tumor is movable laterally, may be pressed down into the depths of the abdomen, but at once resumes its former position. Tenderness on pressure slight. Hydrops in a contracted bladder forms no palpable tumor. Diagnosis as in No. 4—not easy.

(7) Type of Disease.—Empyema of the gall-bladder. Pus in the gall-bladder; stone in the cystic duct; adhesions.

Symptoms.—In the beginning as No. 2. Later there may be no fever. Symptoms as in No. 6. A tumor is usually smaller than in No. 6. No stones are passed. The pains are more confined to the region of the gall-bladder and to the epigastrium. They are less apt to radiate toward the back, the breast, etc.

Diagnosis.—Aspiration of the gall-bladder not permissible. Otherwise as No. 4. Perforation causes the signs of diffuse peritonitis. In the beginning a gall-bladder which contains pus is very painful. Later the pain may diminish or disappear. Localized purulent exudates in the belly are not infrequent.

(8) Type of Disease.—Cancer of the gall-bladder containing stones.

Symptoms.—In the beginning, disturbances of digestion. No jaundice. If a common duct and the portal plexus of lymphatics are affected, jaundice and ascites will occur. Tumor hard and uneven. Later cachexia. Colics are frequently absent.

Diagnosis.—Painfulness slight. Early diagnosis difficult, usually only upon the occurrence of jaundice. The development of ascites, due to the presence of glands upon the portal vein, renders the diagnosis easy. A cancerous gall-bladder with stone frequently becomes infected (empyema).

(9) Type of Disease.—Sudden closure of the common duct by a stone.

Symptoms.—Intense jaundice, colic, vomiting, chills, fever. The symptoms diminish or disappear if the stone passes into the duodenum, or falls back. In the first case the passage of the stone, yet the stone may not appear in the feces for weeks, or not at all.

Diagnosis.—Diagnosis simple. Typical history of former attacks of colic. The pains radiate more to the breast and back. In cholecystitis they are more confined to the region of the gall-bladder and the stomach.

(10) Type of Disease.—Chronic closure of the common duct by a stone. The stone in the supra duodenal portion.

Symptoms.—Moderate jaundice, which may be absent. Is apt to vary in intensity from day to day. Stools sometimes brown. Frequently intermittent fever of a malarial type. Pain is commonly present, but may be absent. The patients finally become cachetic in appearance and develop the hemorrhagic diathesis.

Diagnosis.—The gall-bladder is ordinarily contracted and not palpable. Liver more or less enlarged. Pain on pressure nearer the middle line. The spleen is often enlarged.

(11) Type of Disease.—Chronic closure of the common duct by a stone situated in the papilla of the duodenum.

Symptoms.—Symptoms the same as in No. 10. Jaundice commonly intense; less often of varying intensity. If the inflammation subsides, the jaundice may disappear.

Diagnosis.—As in group 10, gall-bladder is small and contracted, if former attacks of inflammation have occurred which diminish its distensibility. Under other conditions it may become dilated into a palpable tumor. The contents of the gall-bladder consist often of pus.

(12) Type of Disease.—Chronic closure of the common duct by a tumor in the pan-

creas (carcinoma, interstitial pancreatitis), a tumor of the duodenum (papilla) or closure by obliteration of the common duct.

Symptoms.—Intense jaundice, which is rarely variable in intensity, but continues to increase. Stools continuously clay-colored. There is usually no fever. Pain is slight or wanting, and, if present, is dull and rarely colicky.

Diagnosis.—The gall-bladder is commonly enlarged. The liver is enlarged. Tenderness on pressure is wanting or slight. The spleen is frequently enlarged.

It is evident from the symptoms given by this classification, if we wait for biliary colic followed by distinct jaundice and the passage of biliary calculi in the feces we miss the diagnosis in the greater number of patients suffering from gall-stones and cholecystitis.

The symptoms which are most constantly present, and which may be relied upon to base a diagnosis, are therefore not biliary colic, jaundice and the passage of stones in the feces, but digestive disturbances, a feeling of weight and burning in the stomach after meals, gaseous distension of the abdomen, a dull pain extending around to the right side and upward under the scapula, a point of tenderness between the ninth costal cartilage on the right side and the umbilicus. History of having had several attacks of typhoid fever or appendicitis. Slight jaundice observable on close inspection; there may be some increase in liver dullness. Sometimes a slight swelling of variable size opposite the end of the ninth rib. As has been pointed out, the above symptoms are sufficient on which to base a diagnosis, and more severe symptoms should not be waited for. The signs of flatulence, digestive disturbances, deep inspiration which produces pain if deep pressure is exerted under the ribs in the region of the gall-bladder, are in themselves of sufficient import to make one suspicious of gall-bladder disease, and if the latter symptoms are coupled with faint jaundice on the days the patient is not feeling well, there can rarely be a mistake made.

A case in point: Mrs. R., age 30, inclined to be fleshy, came under my notice some four months ago, complaining of more or less heavy pain in stomach and around the region of the gall-bladder, which in this case

was referred to right scapular region. Under diets and eliminative measures, with the production of three bowel movements each twenty-four hours, a diet of the watery vegetables, milk and the minimum amount of breadstuffs, the symptoms became minimized, but upon the least overindulgence or neglect of elimination the severe symptoms returned. There is at times slight jaundice, especially on those days she complains of not feeling well. Temperature ranges from one-half to one degree above normal most of the time. I do not believe this woman has gall-stones, but do believe she has a cholecystitis, and drainage is necessary and will be done.

I cannot close this paper without making a plea for a more careful, early consideration of the symptoms mentioned. Early diagnosis of disease of the biliary passages means an easy operation, relief from suffering for the patient, and a saving from such complications as purulent gall-bladder, perforation and peritonitis, not saying anything about the probability of cancer and death.

THE TREATMENT OF TRACHOMA.*

H. Moulton, M. D.,
Fort Smith, Ark.

The object of this paper is not to exploit any new remedy or theory in the treatment of trachoma, but to make a plea for a more thorough technique than is usually employed in the application of our ordinary remedies.

In the Southwest there is much more trachoma than in the North and East. Ophthalmologists who have received their training in the Northern and Eastern centers often come into this field poorly equipped for the treatment of this disease, for the reason that they see few cases while they are in training, and for the reason that the type of trachoma seen in those centers differs in some respects from the type seen here. The cause for this difference is probably largely climatic.

Some teachers in the East undoubtedly believe that follicular catarrh of the conjunctiva is trachoma, or passes over into trachoma. When this opinion is held, of course

*Read before the Medical Society of the Southwest, at Oklahoma City, October 13, 1911.

the treatment of such cases is simple and easy.

There are more cases there that are suitable for blue stone than here. The granules are not so large and juicy. There is a less tendency to secretion. There are more cases which develop slowly and insidiously from a condition of mild inflammation to full-fledged trachoma. But all in all, there are not so many cases, and they are not often watched by any one student throughout their course.

In this part of the country my observation is that most cases of trachoma begin in what the people call "red sore eyes." A semi-acute contagious ophthalmia is endemic in many parts of the Southwest. Especially do I know this to be a fact in Arkansas, Missouri and eastern Oklahoma. The cases occur among country people whose food is poor and who live in poorly ventilated houses. Some of these cases recover shortly, but many of them pass on into acute trachoma, and some of them have sore eyes (trachoma and sequelae) all their lives.

Apropos of these remarks I can quote as follows from Dr. Samuel Hutten Brown (N. Y. Medical Journal, April 1, 1911): "Trachoma, as it exists in America, and especially in Philadelphia at the present writing, is a most attenuated form of the disease, particularly in the native-born individual."

The above remark was made to contrast the disease as found in Philadelphia with the more virulent type as found among immigrants. However it may be in Philadelphia, I think all who observe the disease here will admit that we have it in a more virulent and destructive form.

There are so many of these cases scattered widely over the country that but few of them ever reach the skilled specialist. Of those who reach him, but few are able to remain until a cure is effected. Thus many of them must depend on the local practitioner from the beginning or be referred back to him by the specialist, and it is because of lack of training that many of the practitioners fail to get the best results. It is, I believe, the duty of the colleges to give the students and practitioners who go to them better training in this matter. Moreover, it is the duty of the specialist to aid in every possible way the general practitioner in getting a grasp of the principles underlying the treatment

of this disease. I would like to reach every practitioner in the Southwest and inspire him with a desire to master this very subject. We can do much in our local societies. We also have a splendid opportunity whenever we refer a patient back to his home doctor.

The first essential in this work is, of course, the diagnosis, which cannot, however, be discussed in this paper.

The next essential is a correct understanding of the nature and course of the disease. Every patient should be told that he can be cured (Mr. Harmon of London to the contrary notwithstanding). But he should also be told that the time necessary to effect a cure is uncertain. It may be a few weeks, or many years. Usually a few weeks or months will practically effect a cure in all but the worst cases, if the patient will select an intelligent doctor and stick to him through thick and thin till the doctor says he is well. If he stops treatment when he gets better, thinking he is well, or when he gets worse, thinking the doctor is at fault, and repeats the process often, he will never get well. This must be firmly impressed at the beginning. I often refuse to treat a case unless the patient is willing to go on, after I have made the above statement, and promises that he will stay with me until I say he is well, no matter how long it may be.

The term cure is here, of course, a relative one, and does not mean that the eyesight will be perfect or that sequelae may not follow. But the earlier or more thoroughly the case is treated, the less are the after-effects. This fact only adds to the value of my plea.

The next and most essential thing in the treatment of these cases lies in the manner or technique of the application of remedies. The books give the indications for the different remedies with sufficient clearness, but give too little space to directions as to their application.

The cleansing collyria are important and should be used freely in such a manner as to produce the least irritation. They are to be used by the patient throughout the course of the disease, and even afterwards, and should be prescribed in large quantities. The best manner of application is the following, which should be carefully demonstrated to every patient:

Let the patient incline his head far back

or lie down on his back, so that his face is horizontal, and turn slightly to one side—say to the left. It will be seen that a cup-like space is thus presented, bounded by the nose, brow, eyeball and cheek. The patient closes the eye and in this space empties a spoonful or dropperful of the eye wash. Then he can open the eye, lifting with his finger first the upper lid, then the lower, and allowing the wash to flow in and out of the upper and lower culs-de-sac until the mucous membrane is entirely cleaned, repeating the process as often as is needed. The face is then turned to the right side a little and the left eye is treated in the same way.

Much less irritation is produced and the result is more perfect than if a dropper, douche or eye cup were used.

The solution for this may be of boracic acid, chloride of sodium or bichloride of mercury, the latter 1-8000.

If the blue stone crystal or 2 per cent solution of nitrate of silver be used, they must be used only by the doctor, or, in extreme need, by some member of the patient's family whom the doctor has carefully trained under his own eye.

The usual directions about turning the upper lid and protecting the cornea until the excess of the application is washed away with a salt or similar solution will not suffice. Generally all that is done is that only that part of the conjunctiva is exposed which lies under the tarsal cartilage. The greater area of mucous membrane in the cul-de-sac above is not exposed or treated, and the treatment does little if any good. This entire area must be exposed, for here the worst part of the disease lies. This can readily be done as Dr. F. C. Hotz first pointed out in the following way:

If the left eye is being treated, stand behind the patient, who sits in a chair, encircling his head with the left arm. Let the forefinger of the left hand hold the erected upper lid against the brow, the patient all the time looking down. Then with the middle finger of the left hand make firm pressure through the lower lid upwards and backwards against the eyeball. This will cause the entire area of mucous membrane of the upper lid and fornix to roll out in full view in a most beautiful way, while the lower lid covers the entire cornea. It takes practice and patience for the surgeon to learn to do

this, and more patience, often, to teach the patient how to behave so that the manipulation may be successful. But every patient can be trained, and it is well worth the trouble. After he is once trained, even if it takes several days to do it, the treatment is then carried out with very little trouble and with the consumption of very little time each day.

The lower lid is more easily treated; by pulling it down while the patient looks up, the surgeon pushing the upper lid down over the cornea.

Of course, to treat the right eye the surgeon still stands behind his patient, but uses his right hand. No person can stand in front of his patient and properly evert the eyelid for the purpose of treating trachoma.

Sometimes it is necessary for the surgeon to use both his hands to fully expose all the upper conjunctiva, folding the upper lid against the brow with the first and second finger of the left hand while he presses the lower lid up and back against the eyeball with the two corresponding fingers of his right hand. In this event he must have an assistant to brush the silver solution on the conjunctiva and wash it off while he controls the eye himself.

The essential thing is to treat every part of the conjunctiva and protect the cornea. Skill or lack of skill in handling the lids and applying the same remedy explains why one man succeeds and another fails. The secret lies in this rather than in the remedy.

As to the surgical treatment, I have never seen anything but good come from the intelligent employment of "Knapp's Expression Operation" or the use of the forceps of Prince or Noyes, or sometimes the eurette, and cannot too strongly endorse them. Some such procedure, generally under ether anesthesia, should be carried out in every suitable case. But the final results of all these surgical procedures depend on the application of a good technique in the after-treatment.

Sometimes I have seen cases of trachoma cured by letting some member of the patient's family, evert his upper lids and drop thereon a few drops of a 5 per cent or 10 per cent solution of protargol once daily, allowing the lid to come back without washing the protargol solution away. This is more effective than dropping the same remedy into the eye in the usual way, and can be carried

out easily and safely by almost anyone.

If the case is one in which you would like to use blue stone, but cannot, because the patient lives at a distance, you will generally do him good, and sometimes cure him or complete the cure by giving antinosine in 2 per cent solution, to be dropped in the eye three times a day. This is a perfectly stable solution, and answers the same purpose as Princess solution of copper in glycerine, and is much easier to apply. Argyrol helps a few cases; it is agreeable to the conjunctiva and aids in keeping the eyes clean, but has very little curative value. With proper attention to details of treatment very few cases will ever require peritomy or the use of jequirity to clear the cornea.

Treat the lids properly and pannus melts away.

For corneal ulceration, atropine and diognim are indicated, but it is not the purpose of this paper to discuss the complications or sequelae of trachoma, or give a list of remedies. The points I wish to emphasize are:

First—Understand thoroughly the nature and course of the disease.

Second—Acquire an efficient technique in the application of remedies, whether surgical or medical.

POSTOPERATIVE ILEUS—REPORT OF CASE RELIEVED BY INTESTINAL PUNCTURE.*

LeRoy Long, M. D.,
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The term "ileus" means, literally, an obstruction of the bowels as a result of twisting. In surgical nomenclature a true ileus is said to be, though not strictly consistent with the derivation of the word, any mechanical obstruction of the bowels—such as obstruction by twists, bands, adhesions. In the consideration of the postoperative state, however, the term is frequently used to indicate the inability to secure a movement from the bowels by ordinary means, and it is so used in this paper. It would probably be more correct to use the term pseudo-ileus, or paralytic ileus.

From a hasty review of the literature at my command it would seem that not much

has been done to apply radical means of relief to this condition. Morse, in a work on Postoperative Treatment, discusses it under the head of intestinal paresis, or pseudo-ileus. He says he is unable to find any literature on the subject, but that the more he observes these cases, the more he considers them neurotic in character, and he believes death to be due to changes in the central nervous system. He says in this connection that some pathologists have held the opinion that these changes were due to the migration of the common colon bacillus. In the treatment he does not refer in any way to operative procedures.

Haubold, in his work on Preparatory and After Treatment, refers to the subject under the head of acute dilatation of the stomach and gut. He speaks of the medical and postural treatment, but says nothing at all about operative procedures.

Crandon, of Harvard, in his work on Surgical After-treatment, discusses the condition under the head of distention. He indicates a number of medical procedures and speaks of the efficacy of certain enemata, but he does not refer specifically to the deliberate opening of the bowel. His nearest approach to such a position is his statement that in these cases, on account of the possibility of dilatation behind a kink, of toxæmia, of peritonitis, any case of postoperative tympanites which progresses in spite of treatment should be considered operative.

The most specific reference coming under my observation is the brief statement by John C. Munro, who writes the chapter on Technique of Abdominal Surgery in Keen's Surgery. He says, in speaking of "acute, rapid distention of septic patients; or occasionally after clean operations, it is well to give atropine combined with morphine, if there is pain, to employ gastric lavage and repeated enemata. In severe cases an enterostomy may be demanded."

Mrs. D., white, thirty-four years of age, married fourteen years, mother of one child thirteen years of age, was referred to me by Dr. Willour, Atoka, Okla., on May 24, 1911, with a diagnosis of ectopic pregnancy before rupture. I examined the woman at my office and concurred in the diagnosis already made by Mr. Willour, who accompanied her. A mass could be made out on both sides, and it was concluded that there was a neoplasm involving the tube, ovary, or both, on the side

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opposite the impregnated tube.

The patient entered All Saints' Hospital that afternoon, and at 7:40 o'clock the record shows she was given two ounces of castor oil. Early the next morning she had a copious movement. At 6 o'clock the same morning she was given an enema, after which there was a free movement. At 10:10 a. m. the record shows that she had a "medium, soft, yellow stool."

The patient entered the operating room at 11 o'clock a. m., with a temperature of $98\frac{1}{2}$, pulse 62 and of good quality. The operation was done with the patient in the Trendelenberg position. When the abdomen was opened there was found on the right side a cystic tumor, involving both tube and ovary. The tumor and both the tube and the ovary were removed. The left tube was found distended and tense. It looked much like a Bologna sausage, and was probably three-quarters of an inch in diameter. There were no adhesions about it, and it was easily removed without disturbing the ovary, which was left. This tube, when opened subsequently, was found to contain a foetus. The round ligaments were shortened on account of a retro-displacement, the appendix was removed and the patient went off the table a little after 12 o'clock, with a pulse rate of 68 and of good quality. At 4:40 o'clock p. m. she complained of being very uncomfortable and of difficulty in breathing on account of a feeling of distention in the region of the stomach. Her pulse rate was 62. She was given one-sixth grain morphine, hypodermically. At 6 o'clock p. m. her temperature was $99\frac{1}{2}$, pulse 66. She drank and retained some water. At 9 o'clock she complained bitterly of difficulty in breathing. The morphine was repeated and she rested pretty well until 2 o'clock a. m., when she again began to suffer. When I saw her about noon she had a temperature of 100, respiration 20, pulse 76. There was very marked distention, and the patient was uneasy and miserable. At 6:30 o'clock p. m. a soap enema was given, but the water was returned without any fecal matter. At 11:30 o'clock p. m. she was given an enema of four ounces of glycerine to a pint of warm water, but without results. About midnight her stomach was washed out and the patient turned over on her abdomen. She received no relief. Ten grains of calomel were administered, followed by hypodermic,

one-fourth morphine and one-one hundred and fiftieth atropine. The patient was fairly comfortable until 6 o'clock a. m., when she was given one-half ounce magnesium sulphate. At this time her temperature was $98\frac{1}{2}$, respiration 20, pulse 70. The abdominal distension was more marked. She was given an enema at 8:30 o'clock, and again at 11 o'clock, but without results. During the day a number of enemas were given, but without results. A digital examination of the rectum disclosed that it was entirely empty.

Dr. Willour, who referred the patient and who had assisted in the operation, arrived in the afternoon, and he, my brother, Dr. T. J. Long, and I had a consultation at 5 o'clock p. m. At this time the abdomen was fearfully distended. Reopening the abdomen was advised. The patient and her husband agreeing, she was taken to the operating room at 6:10 o'clock p. m., about fifty-four hours after she had gone off the table from the first operation. At this time her temperature was $99\frac{1}{2}$, respiration 20, pulse 96.

The abdomen was reopened through the original incision, which was lengthened to above the umbilicus. An enormous mass of intestine, distended to the utmost, bulged through the incision. So large was the mass that it was with difficulty we were able to keep the intestines in position on the abdomen of the patient. The small intestine seemed to be distended more than the large, but of this I am not sure, as the former first presented and the latter was not carefully investigated at first. There were many hemorrhagic areas. This was more marked in the small intestine. There was a great deal of fluid in the free abdomen. At several places the gut had been denuded of peritoneum and presented an appearance that would indicate that there had been a kink, but we were not able to identify any particular place as a point of obstruction. The intestine contained a great deal of semi-fluid material, as could be demonstrated by moving the coils to and fro. Several punctures were made with a small trocar, but the process was found to be slow and unsatisfactory. I had the nurse quickly sterilize an Emmet's ovariectomy trocar about five-sixteenths of an inch in diameter. This was thrust into the small gut opposite the attachment of the mesentery. A great deal of gas escaped, and, by milking

the intestine, a great deal of the semi-fluid material also escaped. Through this procedure the small gut was soon emptied of gas and most of the semi-fluid material. The opening was closed, as had been the small punctures, by Lembert sutures, when the same procedure was carried out in the big gut.

After the intestines had been emptied and replaced, the abdomen was filled with hot normal salt solution, three small tubular drains placed and the incision quickly closed by through-and-through silk worm gut sutures. The patient went off the table with a pulse rate of 150, and barely perceptible. At first she was placed flat in bed and proctoclysis begun. At 9:15 she began to do better, the pulse rate being 138. As the evidences of shock passed away the head of the bed was gradually raised until it was elevated about eighteen to twenty inches. The normal salt was continued; morphine and atropine was given hypodermically as necessary for pain or restlessness. Strychnia was given in one-thirtieth grain doses, hypodermically, every three hours, more for the effect on the muscular coat of the bowel than for effect on the heart. The next morning after operation the temperature was 99, pulse 114. An enema was given and a large quantity of gas was expelled, but no fecal matter. At this time one-fourth grain doses of calomel every hour were begun and kept up through the remainder of the day. The next morning at 9 o'clock the record gave the welcome information that there had been a large liquid, dark green bowel movement. The temperature was 99½, pulse 102.

After this, for several days, the patient was very uncomfortable, but, taking all things into consideration, her progress was entirely satisfactory, if not entirely uneventful. She was discharged on June 18, twenty-two days after the operation. Since then she has gained thirty pounds in weight, and is now entirely well.

DISCUSSION.

Dr. L. S. Willour, Atoka, Okla.: With reference to the case reported by Dr. Long, the doctor made an incision through the abdominal wall with the intention of bringing through a loop of intestine and making an artificial anus. That would be advisable, as the muscular coat of the intestine might not regain its tonicity before it would fill again, and, should it fill again, there would be as much pressure as there was primarily, and it would not regain its activity. However, we were fortunate in this case, in that the bowel

regained its tonicity and became active before it had refilled. I do not recall the authority, but someone has recommended that this drainage in the intestine be established by means of the Murphy button; that is, one end is to be inserted in a catheter, and at the other end an opening made in the intestine and the Murphy button slipped together, and in that way establishing drainage without the contents escaping about the wound.

Dr. Long did not say anything with regard to the cause of this condition. I have been at a loss to find any authority who could give me a satisfactory explanation as to the cause. I believe Ashton gave the best reason for its occurrence of any authority I have read. He said it was due to exhaustion of Auerbach's plexus which controls the peristaltic movement of the bowel; that the bowel is stimulated by the rigorous purgation resorted to before the operation, and on account of the difference in temperature after the abdomen is opened, and the handling of the intestines, the stimulation goes on to such an extent that it exhausts the activity of the plexus of Auerbach, and we have paresis. I think the paralysis then continues long enough so that the intestine fills, and by the extreme pressure nervous tone is paralyzed, and the bowel cannot regain its tonicity. In these cases, by puncture of the intestine, we can afford relief, and patients will recover from this procedure much more frequently than was the case in the past where this measure was not adopted.

Dr. Howard Hill, Kansas City, Mo.: I have had a great deal of experience, unfortunately, in cases of intestinal obstruction, and cases like these sometimes get well, and sometimes they do not. It seems to me the chances are that it is merely a question of shock. What would shock one patient would not shock another. Some patients who are operated on quickly under ordinary circumstances do not show any symptoms of shock, while others who are operated on under similar conditions are more susceptible to shock. It is a curious thing to see and study the different cases of intestinal obstruction. One patient in whom the obstruction has existed for only a short time will be in a terrible condition. Not long since we had a patient with a hernia in the duodenal fossa. A diagnosis was made, the intestine partially pulled out, yet we had a fight with that patient for three days before the distension of the abdomen gave way.

With reference to operation, most of the patients with intestinal obstruction will die, ordinarily, unless these patients happen to fall into competent hands and are dealt with promptly. When these patients are seen about the end of the fourth day they generally die, because they are practically poisoned and it does not make much difference what is done.

Two years ago Dr. Lord, of Omaha, reported, before the Western Surgical Association, four cases of postoperative ileus and some ordinary cases of mechanical intestinal obstruction. He did not attempt to do too much, but took the first loop of intestine and brought it out through a small opening, relieved the obstruction, and four of the patients got well. The next year he reported four additional cases, and all of them died. That is about the way they go. Some of them get well, and some of them die. I have thought that the administration of eserine, one-fiftieth of a grain, every three hours, helped these cases to recover tone, if seen early enough at the time of the distension when we begin washing out the stom-

ach. It may be that this is all imagination; nevertheless, I think it is better to do it.

Dr. Long is to be congratulated on the outcome of his case.

Dr. J. N. Jackson, Kansas City, Mo.: Probably the condition which Dr. Long has described to-day presents the most important unsolved problem in surgery. I spoke in my paper of similar conditions where we did not make a diagnosis of appendicitis. Here we come in contact with many conditions in which we have likewise incorrectly diagnosed appendicitis, and some surgical catastrophes have occurred, in that operation for the removal of the appendix has not been followed by any results.

As to the one single lesion which is limited to the small intestine, and known as the "Lane kink," it has been my privilege to have seen only three cases of well defined "Lane's kink." I am not, therefore, in a position to express an opinion, except to remark that the simple liberation of the band of plastic solution, with a suture in the opposite direction, relieves this which is undoubtedly a localized intestinal obstruction. In at least two cases I was able to make a diagnosis of a probable condition of this sort from the symptom of sudden escape of gas by the spot, and by some localized pain. In obstruction of the large intestine the pain is over a diffused area. In "Lane's kink" it is internal to the location of the appendix proper, and, unlike the ordinary attack of appendicitis, is relieved quickly as soon as the gas passes by the obstructing band. These conditions which occur about the colon are invariable in the extent of their involvement, and are very confusing as to the correct interpretation of their pathological origin, and also surgical treatment. The first time I ever heard of this condition at all was in a paper which Dr. Binnie published in 1905, under the subject of "Peritonitis Dextra," in which he called attention in his description to the formation of this sac and to adhesion about the right side, but, as I remember at the time, without any definite interpretation of the clinical symptomatology. My own observation of the condition, which I described under the head of membranous pericolicitis, was very clear to me, and the term was applied because it defined a particular type of membrane found around the colon. Lane, in his studies of intestinal stasis, in my judgment, and from my experience, has gone a little to the extreme in the wide variation or wide dissemination of the lesions, as he finds them. I will admit that occasionally some bands may be found about the splenic flexure, and possibly about the sigmoid flexure, because I have operated in the last two years since Lane's original paper was published, and I have looked at the opposite bowel for this formation, and, so far as my experience goes, it has been confined to the right side of the abdomen, and largely between the cecum below and the hepatic flexure above. Necessarily one would think from the type of case that I assumed it was inflammatory in origin, and I am frank to say at the time of the writing of this paper I was inclined to the view that this membrane was inflammatory. I think Lane undoubtedly has described the same condition that I did in my article, and the only objection I have to Lane's description is that he speaks of it as an adhesion. An adhesion is something which binds one organ to another. This was a well formed, absolute membrane.

There have been two or three theories advanced as to the possible origin of this adventitious mem-

brane on the outside of the colon, whatever it is. Hertzler has called it a pseudo peritoneum; that is, the peritoneum has been lifted up by a subperitoneal exudate, possibly there being a beginning chronic intestinal stasis with transudation through the thickness of the gut wall of either chemical toxins or mild bacteria, not producing pus, and these lifting up the peritoneum and shutting off its connection with the visceral blood supply, and the adaptation of the blood supply from the parietal peritoneum, so that the blood vessels are allowed to run, instead of transversely, with the visceral supply coming down practically vertically, and parallel from that side toward the cecum. This explanation is substantiated from the fact that we have two things: One is that absorption takes place from that portion of the colon and the transudation of bacteria or toxic material occurs from there more than anywhere else, and another thing that would probably lend color to that description is the fact that the intestinal flora are more pronounced in that locality than elsewhere.

Dr. H. C. Crowell, Kansas City, Mo.: I have had experience with these cases of paralytic ileus, and the question arises and has arisen with me, until I am satisfied in my own mind, and have carried into practice the results of my observation of the fact that we have for many years "physicked" and prepared our patients too well, particularly when we resorted to the use of salines. I presume no one does that now. If we eliminated the serum, we lessened the probability of the patient standing the shock necessary to the operation. These patients did not do as well. We then used castor oil, which was better, but I believe firmly there is no reason why these patients should be "physicked," and now it is a rare thing that I "physic" a patient at all. If I do so, it is three days before operation, in order that the flora liberated at the time shall have an opportunity of disappearing from the intestinal tract because of the distension and fermentation and ileus resulting in the paralysis which we have. I would wash out the bowels the night before, and wash them out on the morning of the operation. The small intestine contains only liquid matter, and you clean out the large bowel by washing it out, and the patient stands the operation much better.

I have had four cases of ileus or gastric distension since I have adopted that practice. Craig, of Boston, has been a great advocate of eserine, and I am convinced there is something in its use, and in order to get the benefit of the eserine there is no way by which we can tell which class should have gaseous distension, but he insists, and I have properly used it, that the first dose should be given while the patient is on the table, and followed up in three or four hours with a one-fiftieth grain. I have used it, as has been suggested, after there were symptoms of distension, and I have thought that I got benefit from the use of the physostigmin, and the patients have, as a rule, recovered. But I believe the thing to do, if the patient does not show improvement, is to open up quickly, bring out the gut, make a hole in it, wash it out and leave it to drain.

Dr. Long (closing): I feel that if we can prevent ileus it is very important, but I did not dwell on that point particularly. The thing I wanted to bring out was the position we were in and what we could do for it; but the result in this case was a radical procedure. Eserine and strychnia would have helped to have kept up muscular tonicity, and might have prevented the ileus. I must say that prior to this time the patient never had much trou-

ble. She had gas pains and some distension, but I had gotten to the place where I felt fairly secure, and I felt more secure in this case until the second day, and it is hard for anyone to realize, who has not seen the actual condition of this tremendous distension which we have in cases like this. This woman's condition was such that nothing in the way of medicine would do any good.

ETIOLOGY AND TREATMENT OF CLINICAL MANIFESTATIONS RESULTING FROM CERVICAL ANTEFLEXIONS.*

By Charles S. Holt,
Fort Smith.

Anteflexion, retroversion and the clinical manifestations, such as dysmenorrhea, sterility, etc., can only be satisfactorily understood and treated after a thorough knowledge of the structures which support the uterus. The modern theories concerning the structures which support the uterus to be considered here are:

(1) That these structures are more muscular than ligamentous, and particularly that the anterior attachments of the cervix are more rigid and less muscular than the rest of the supporting structures.

(2) Spasms of the muscular structures (erroneously called uterine ligaments) is the principal etiologic factor in the production of the symptoms of the above mentioned disorders.

(3) The condition described as anteflexion of the cervix is due to an imperfect or arrested development in which persistence of an undeveloped anterior vaginal wall, as well as the anterior attachments of the cervix, is the most important etiologic factor.

We are therefore correct in maintaining that a satisfactory explanation of the mechanism by which cervical anteflexion produces dysmenorrhea and sterility can only be obtained from the above theories, and that a rational and successful method of treatment for their relief must be based on these principles.

In all these cases the cervix is held forward by essentially nonmuscular structures, while the other pole of the uterus (the fundus) is held forward only by muscular structures which are capable of relaxation. The existence of a cervical anteflexion, therefore, implies of necessity a predispo-

sition to retroversion which must be taken into consideration in all operations upon uterine displacements, when we have this condition.

Since the clinical importance of spasm of the uterine supports has received but scant attention from gynecologists, and since their muscular composition is not mentioned in the older text-books on anatomy, I will briefly discuss the anatomical and clinical facts concerning these assertions.

The round ligaments have long been recognized as off-shoots or prolongations of the muscular coats of the uterus, but the muscular tissues of the other uterine ligaments is composed of somewhat disseminated unstriped fibers, is not aggregated in bundles, is not capable of gross post-mortem recognition, and has therefore not been recognized. Its adequate post-mortem demonstration has been accomplished, however, by serial microscopic sections which involve a great many technical difficulties, but their existence has nevertheless been fully demonstrated in recent years. The following authorities furnish evidence of the presence of muscular tissue in uterine ligaments: Sobotta, Piersol, Gerrish, Morris and Buchanan.

Muscular tissue is found sparingly, according to those authors, in most of the pelvic connective tissues, and exist particularly in considerable quantities in three situations, throughout the utero-sacral ligaments, at the base of the broad ligaments and along their upper edges.

While these three groups of muscular tissue can be demonstrated by properly stained histologic sections, their action and even their mass is recognizable during life and should be familiar to every gynecologic surgeon. It is also necessary to remember their origin and insertion.

In contemplating the action of the broad ligament it must borne in mind that they are narrow at their uterine insertions, but widespread at their point of origin at the pelvic wall. At their upper margins the muscular tissue contained in the round ligaments and the muscular bundles which accompany the ovarian vessels spread widely forward and backward, and by their combined action, therefore, exercise a lateral traction. The round ligaments tend to draw the fundus forward, the ovarian bundles tend to draw the uterus backward, when they act

*Read before the meeting of the Tenth Councilor District Medical Society, held at Springdale, on March 19, 1912.

in conjunction, the result is a lateral traction; but we must also remember their individual action.

At the base of the broad ligament, where strong bundles of muscular tissue follow the uterine vessels, the muscular expansion is fan-shaped, and as a whole must therefore have a lateral action.

The utero-sacrals, or, rather, their most active part, is at the cervico-corporeal junction. When they act conjointly their action is directly backward, but spasm of one utero-sacral with relaxation of the other is probably a phenomenon of considerable clinical importance.

Further structures of importance as uterine supports are the attachments of the supra-vaginal portion of the cervix. These fibers are attached anteriorly to the pelvic wall and posteriorly to the anterior-lateral surfaces of the cervix and vagina. The most noticeable bundles have been described as utero-vesical ligaments, but their muscular character has never been sufficiently emphasized.

Another uterine attachment of much importance is the insertion of the anterior-vaginal wall into the cervix; this wall is largely nonmuscular and is attached at one end to the cervix and at the other end to the arch of the pubes.

Comparative anatomy cannot be depended on for information, since the uterine supports, as we know them, exist only in the human female (with probably some foreshadowing in the primitives).

While we may gain a great deal of insight in the study of those muscular structures during the course of abdominal operations, the fact that these operations are always conducted under surgical anesthesia and in the interest of our patients, do not permit of waste of time and the risk of infection to which they would be exposed by their examination, precludes the gaining of considerable knowledge from this source.

A great deal of information can be gained, however, by comparing the results of tactile examinations on the same patient with and without anesthesia. Particularly in cases of pathologic spasms. These observations have been described in a fairly clear form and some observers have described three such spasms.

Retrocession.—In cases of retrocession observed by recto-vaginal examinations

without anesthesia, it is found that the most marked feature of the condition is shortening or rigidity of the utero-sacral ligaments, so called. This was formerly thought to be organic and its recognition led to the operation of division of the utero-sacrals by vaginal section. An operation at one time very popular, but at the present rarely mentioned. If we perceive this condition as one of spasm or contraction of the utero-sacral muscles, we get an idea which corresponds nearer with the history of this affliction; moreover, if the same patients are examined by the same methods under complete anesthesia, the rigidity and shortening of the utero-sacrals is generally found absent, but is present again after the withdrawal of the anesthesia. The only exception to this statement we find in those cases of long continued inflammation where we have had considerable of an exudate.

Lateral Uterine Displacement.—This condition has not been studied so extensively. Still, if we carefully note the relation of the uterus to the median plane of the pelvis as a routine step in our clinical examinations, we will soon become convinced of the frequency with which it is drawn to one side or the other. In some cases the contracture involves the fundus mainly, at other times the cervix only, but more generally the uterus as a whole is drawn to one side of the pelvic plane. The general supposition has been that these contractures are organic and the result of either inflammatory shortening or cicatricial contractions. While this is without doubt the cause of some cases, in others, however, observation of the same conditions under complete anesthesia will show disappearance of the contracture with its reappearance after withdrawal of the anesthetic. We cannot see how one can avoid the conclusion here that the contracture is spasmodic.

Anteflexion of the Body.—Examination without anesthesia will show in a great many cases the presence of sharp anterior flexion of both cervix and uterine body; examination of the same condition under complete anesthesia will show that while the cervix is still held somewhat strongly forward, that the body of the uterus is in its normal position, or at times even in some degree of retroversion, with resumption of its former position after withdrawal of the anesthesia. The phenomenon can only be due to spasm.

While the question of the cause or causes of these localized muscular spasms is vital to their treatment, we are not always able to offer a satisfactory explanation at the present time.

We will now discuss briefly some of the troubles produced by antelexion. While it may be true that in cases in which antelexion of the cervix is associated with dysmenorrhea, the alteration in the shape of the organ is partly the result of an organic (developmental) vice of shape, and partly the result of an exaggeration of the shape by spasm of the muscular supports of that organ it is necessarily true that even during the inter-menstrual interval there would be some approach to an obstruction of the utero-cervical canal, such as may be produced by making a sharp bend in a rubber tube, and it is still more true that with the approach of the menstrual congestion, producing increased tension within the uterine wall, the obstruction would be necessarily and mechanically increased. Intermittent or constant partial obstruction of the menstrual flow would therefore exist even in a canal which would permit the passage of a sound.

While this would, of course, explain the dysmenorrhea, it is not wholly necessary to invoke this obstructive condition, for, throughout, the body pressure is pain, and increased pressure must of necessity exist where the tube is bent upon itself. In the majority of cases this point will afford an adequate explanation for all of the menstrual pains in the condition which has been so long described as obstructive dysmenorrhea. If antelexion of the cervix is associated with sterility it is possible that the mere obstruction of the lumen of the cervical canal, due to congestion and spasm of the interpelvic muscles, which without doubt forms part of the act of coitus, may in itself be the cause of sterility. However, a great many observers find sterility associated with greater or lesser alterations of the cervical and other genital secretions, and in cases of antelexion of the cervix it is most always associated with dysmenorrhea. It seems, therefore, more plausible to assume that the sterility so frequently found in these cases is the result of changes in the endo-cervical mucus membrane, caused by partial retention of the menstrual flow and of the inter-menstrual secretions of the uterine cavity, rather than a mere mechanical matter.

Retroversion is frequently the result of congenital antelexion of the cervix. If the conclusions set forth hold true—for instance, if in the antelexion both poles of the uterus are held forward by structures which are liable or subject to muscular spasms, while the cervical-corporeal junction is held backward by the utero-sacral muscles (ligaments), thus increasing the vicious circle if it is also true that this increase of the vicious curve is resisted by the intrinsic muscles of the uterus, and further, that the structures which hold forward the fundus are more exclusively muscular, more capable of complete relaxation than those which hold forward the cervix, it would follow that with relaxation of the spasm the backward movement of the fundus would be greater than that of the cervix, and the movement of the fundus backward while the cervix stays forward is of necessity a tendency toward retroversion.

It would also be true that if the structures which hold the cervix abnormally forward are organically (developmentally) shortened, any considerable motion of the uterus, such as results from forced use of the abdominal muscles, falls or accidents, would be exerted chiefly on the fundus, which is subject to normal freedom of movement, while the cervix is abnormally fixed—that is, there would again be a tendency toward the production of retro-displacements from slight causes.

I think it would be a good plan in practice to observe the shape and degree of forward attachment of the cervix in every case of retroversion. I also think it would be best to perform a plastic operation for correction of the forward fixation of the cervix as a preliminary operation for retro-displacement, and this should be done particularly in those cases in which maldevelopment exists in a high degree. The operative procedure which I would advocate for the treatment of antelexion of the cervix is simple and plain, and, if carried out with proper attention to its principles, should be very effective. Two details must be given careful attention. After preliminary dilatation and curettage, the length of the cervix from the external os to the point of flexion should be carefully measured and the posterior lip of the cervix divided with the scissors in the median line up to this point. The angle between the line of the cut and the edge of the external os should then be

sutured into the extreme upper end of the cut after the manner of Dudley's decision of the cervix. The attainment of the actual angle of flexion by both cut and suture is the first essential point in the operation.

The anterior lip of the cervix is then seized by a tenaculum and drawn strongly backward, thereby putting the anterior wall strongly on the stretch; the vaginal wall is then divided transversely with the knife immediately in front of the cervix, the cut being just wide enough to admit a finger and carried completely through the vaginal wall, with the knife and scissors, exposing the bladder. The finger is then passed into this cut and the bladder freed from vagina and cervix, well up along the anterior surface of the uterus. A similar blunt dissection with the finger separates the anterior attachments of the wall of the vagina and base of the bladder wall out to each side. The making of this separation laterally sufficiently extensive and up to the angle of flexion is the second essential detail of the operation.

The edges of the wound are then brought together by transverse sutures, nothing but the vaginal wall being included in their grasp, thus elongating the anterior vaginal wall. If usual skill is employed in the blunt dissection with the finger, there should be no hemorrhage. In the majority of cases of ante flexion this little operation is a radical anatomical corrective, and affords one of the best treatments for the relief of the conditions resulting from ante flexion, such as dysmenorrhea, sterility, etc.

For abdominal operations I prefer Montgomery's retro-peritoneal shortening of the round ligaments. Through a median incision each round ligament is caught about one and one-half inches from the uterus and secured by a temporary loop of catgut, the ends of which are threaded in an eye of a Deschamp needle.

Through an opening made in the anterior leaf of the corresponding broad ligament the needle is carried through between the two layers of the ligament until it reaches the point where the peritoneum is reflected on the abdominal wall, when it is carried through and unthreaded, and the ends of the ligature secured by forceps. The same steps are followed on the opposite side. A loop of the ligament drawn through and secured to the outer surface of the aponeurosis by chromic catgut sutures.

The loop is drawn through sufficiently to bring the fundus of the uterus well forward. The position of the uterus can be governed by drawing up or relaxing the projecting loop. This procedure imitates the virtue of the Alexander operation in that it utilizes the strongest part of the round ligament, that portion nearest the uterus, and this is the advantage of its adaptation to all displacements, whether complicated or uncomplicated. The operation permits the treatment of diseased conditions of the tubes and ovaries. It leaves no raw or injured surfaces within the peritoneal cavity and provides a support capable of undergoing evolution and involution.

THE JOURNAL

OF THE

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All communications to this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the State. Notice of deaths, removals from the State, changes of location, etc., are requested.

ADVERTISING RATES.

A schedule of rates will be furnished upon request.

CHANGE OF ADDRESS.

Change of address will be made if the old as well as the new address be given.

ANONYMOUS COMMUNICATIONS.

No anonymous communications will appear in the columns of this Journal, no matter how meritorious they may be.

NOTICE.

All changes of address should be sent to Dr. C. P. Meriwether, secretary of the State Society, as he furnishes the mailing list each month of our members. All communications for publication should be sent to the editor not later than the 5th of each month.

Editorials.

WORK FOR COUNCILORS.

The office of Councilor is the most important as well as the most honorable of any created by the State Society. The following counties are without societies, and strong efforts should be made by the Councilors to bring them into line before the State meeting:

First District—Poinsett. Dr. M. C. Hughey, Councilor.

Second District—Clebune, Fulton, Izard and Sharp. J. H. Kennerly, Councilor.

Third District—Cross. T. B. Bradford, Councilor.

Sixth District—Little River, Pike. J. S. Kosminsky, Councilor.

Seventh District—Scott. R. Y. Phillips, Councilor.

Ninth District—Marion, Newton, Stone and Van Buren. F. B. Kirby, Councilor.

Tenth District—Madison. M. S. Dibrell, Councilor.

Gentlemen of the Council, the Arkansas Medical Society would be delighted to have you report the organization of societies in these counties. It is your duty to do this, and certainly there is sufficient urgency to compel you to make one long, strong pull right now. If you have not read the duties of the Councilors, please do so and act accordingly. Notify the secretary of your action immediately.

THE HOT SPRINGS MEETING.

The thirty-fifth annual session of the Arkansas Medical Society will be held at Hot Springs on the 13th, 14th, 15th and 16th of May, under the auspices of the Hot Springs-Garland Medical Society. The Eastman Hotel has been selected as the place for holding all meetings. The Arlington Hotel will be the headquarters, where a registration bureau will be established for the convenience of members.

This meeting promises to be the most important in the history of the Society, and there should be a large and representative attendance.

The following are some of the important measures which will come before the House of Delegates for consideration:

1. A Public Health Bill.
2. Amendment of Medical Practice Act.
3. Organization of a Medical Defense League.
4. Status of University of Arkansas Medical Department.
5. Amendment of Constitution.

Hot Springs knows not only what to provide in the way of entertainment, but how to make her guests enjoy themselves once they are within her hospitable borders.

The local society and the citizens of Hot Springs are sparing no efforts or expense in providing entertainments for all visitors, and it is enough to say that when Hot Springs throws her hat of hospitality in the ring, she defies any city on earth to accept the challenge.

Monday, May 13.

The House of Delegates will convene on Monday, May 13, at 8:30 a. m. The entire day will be devoted to transacting the business of the Association.

Tuesday.

The general session will be held on Tuesday morning at 9 o'clock. There will be Fraternal Delegates from several adjoining states to be introduced and welcomed at this meeting.

Immediately after adjournment the scientific work of the sections will be taken up. No time will be lost, and every hour will be filled.

Wednesday.

On Wednesday night there will be an adjourned meeting of the Section on Practice of Medicine, and Dr. W. S. Leathers of the University of Mississippi, and State Director of Sanitation, will deliver an address on Sanitation. Dr. Leathers is one of the most pleasing speakers of the South.

At 10 o'clock there will be two reunions—Tulane and University of Arkansas. Dr. Isadore Dyer, dean of Tulane, Dr. Allen, Dr. Parham and Dr. Martin, all of New Orleans, will be present. An attendance of one hundred is expected.

After the alumni banquets there will be a grand ball at the Arlington.

Thursday.

Thursday afternoon there will be a joint meeting of the Society and Arkansas Pharmaceutical Association. Dr. W. A. Evans of Chicago will be present and make the address on behalf of the Society. The druggists will be ably represented by selected speakers. This joint conference promises to bring the physicians and druggists just a little closer together.

At 9 o'clock the citizens of Hot Springs will tender a banquet at the Arlington Hotel.

Editorial Clippings.**THOREMEDIN—A TYPICAL NOSTRUM PUT OUT UNDER THE HONORED NAME OF SQUIBB.**

William Allen Pusey, M. D.,
Chicago.

In September, 1911, E. R. Squibb & Sons published (in Squibb's Memoranda for the Medical Profession) the "first comprehensive report regarding Thoradin, which, in the hands of Dr. Bulkley and other eminent dermatologists, both here and abroad, has proved a remarkably efficient and safe remedy for epithelioma, lupus, nevi, pustules (?), angioamata, verrucae, moles, chronic eczema, acne, etc." In passing, it may be said that in this report, aside from Dr. Bulkley, there were no

"eminent dermatologists" whose names were familiar to me. In January they issued another report on the same remarkable agent, but this time under the name Thoremadin, because "since our previous report, in which the new remedy¹ was called Thoradin, we have learned that an entirely different article is offered under a similar name."

The reports do not specifically assert that the therapeutic efficacy of the remarkable "new remedy" is due to its radio-activity, but certainly they do not suggest that it is an old chemical caustic, and the implication is clear from the context that its efficacy is at least bound up with "radio-active Thorium." First, there is the radiant-energy suggestion of the name Thoradin—name surrendered under trade necessity—with its combination of the roots of thorium and—that element of the mysterious powers—radium. Then again, "Thoremadin (the name given to the Thorium Remedy) consists of radio-active Thorium in combination, etc." Note in this connection that it is specifically a "Thorium Remedy"—in capital letters. Further, "in some cases it [Pasta Thoremadin.—W. A. P.] alone produces the same results as an operation and postoperative radium treatment combined." Still further, "Pasta Thoremadin affords an excellent substitute for the X-rays in postoperative treatment of neoplasms. * * *". Of course, suggestion of the radio-active efficacy of this remedy could go little further than the last two sentences offering it as a substitute for radium and X-rays for postoperative therapeutic purposes.

On the other hand, as suggestive that it is not simply a chemical treatment, these sentences suffice: "Its destructive power can be entirely controlled * * *; a thing that cannot be done in the case of * * *, concentrated mineral acid. * * *". And " * * * most of the cases thus far treated have been chronic where prolonged chemical treatment and even surgical operation had been of no avail."

The Imposing Container.

As a final indication of the mysterious potency and dearness of the remedy, the container of Pasta Thoremadin is, I think, an interesting study. First, there is a handsome round screw-top aluminum box; within there are two little glass rods and two little glass spatulas; then a strip or two of fire-resisting asbestos, lining the sides of the box, and finally—oh, mystery—one comes to a little two- or three-dram glass-stoppered bottle with its precious contents of a teaspoonful of the Pasta, or, in the vernacular, paste. Surely here is a precious and powerful agent. As examination will show, the bottle would as well be packed in a handful of sawdust.

With the report of the new remedy came, from Europe presumably, one C. B. Semerak, to me unknown, who has "decided to remain permanently in the United States"—address, care Squibb—and give instructions and advice concerning his remedy. In the January report he modestly admits having received, in addition to "a large number of records of good results from its use," "a few adverse criticisms," "but in each case careful investigation proved that the difficulty was due to a faulty technic rather than to Thoremadin itself or to my method of applying it." And "in my experience, covering eight years of observation in the use of Thoremadin in various hospitals and of treatment of many hundreds of patients, including cases of lupus, epitheliomata, angiomata, moles, verrucae, etc., I have not found more than

1. Emphasized words given in the quotations throughout the article are for the most part mine.—W. A. P.

from 3 to 4 per cent fall short of a good result. These failures were all cases of epitheliomata in which the deep tissues were infiltrated, and for which a surgical operation should have preceded the use of Thoremadin." (Here the suggestion of the postoperative use of Thoremadin bobs up again.) In short, the remedy has proved, in a long experience of Mr. Semerak's—he is not a physician—without failures in various formidable skin lesions, including lupus and angioma, and almost infallible in epithelioma.

What Is It?

What is this wonderful remedy with such claims and sponsored by the great firm of Squibb? Exactly, we are not told. It "consists of radio-active Thorium in combination with didymium, lead and sulphuric acid. * * * To state at this time the exact quantity in which each ingredient is present would add nothing of practical value to the physician, but * * *"—the well-worn reason of proprietaries.

What the use of didymium is in this mixture we can only surmise. It has no known value as a local therapeutic agent and is not classified among the radio-active elements. My own surmise is that it is the old expedient of adding something rare and unfamiliar for mystery's sake.

The thorium practically falls in the same class. It has no known therapeutic uses. Its radio-activity is about the same as that of uranium—about one two-millionth part of that of radium. If Thoremadin Paste were saturated with thorium, it would be as useful therapeutically on account of its radiant energy as a paste made of powdered Welsbach mantles.

Nevertheless it seemed desirable to determine the radio-activity of Thoremadin Paste, and Prof. Henry Gale and Mr. L. J. Lassalle, of the University of Chicago, kindly made the determination for me. The material for this examination and for all of my other tests of Thoremadin were obtained from a package of Thoremadin Paste which I purchased unbroken from a local druggist. This sample of Pasta Thoremadin was found to have about one-fortieth the radio-activity of thorium nitrate in a fine powder and one-fourth the radio-activity of a paste which I had made up containing 10 per cent thorium nitrate with 33 per cent sulphuric acid and 57 per cent lead sulphate. In other words, it has a content of radio-active material equivalent to 2.5 per cent thorium and has a radio-activity of one eighty-millionth part of that of radium bromid.

A Comparison.

In order to get some idea of what this means, it is interesting to compare for a moment its possible therapeutic application with that of radium, whose remarkable therapeutic uses have given rise to these various "radio-active" remedies. Let us assume that an epithelioma the size of a finger-nail will be cured by an application of 10 mg. of radium bromid for ten minutes—an assumption far short of actual practice with radium. On the same basis, to cure the apithelioma with the radiant energy from the same quantity of Thoremadin would require 80,000,000 times ten minutes, or over 13,000,000 hours—a good deal more than 1,400 years. And if the patient could not wait 1,400 years for a cure, and wished to apply a quantity of radiant energy in the form of Thoremadin Paste equal to that of 10 mg. of radium bromid, he would have to use 80,000,000 times 10 mg., or 800,000 gm.; i. e., almost a ton. Or if instead of applying 1,500 pounds—say a barrelful—of Thoremadin Paste for ten minutes, he wanted to re-

duce the quantity and increase the time of application to, say five hours, he would still have to use 60 pounds of Thoremadin Paste; and 60 pounds of Thoremadin Paste would eat the face off a graven image in five hours.

In view of its entire lack of any effective amount of radiant energy, I have no doubt whatever that radio-activity plays not the slightest part in the therapeutic action of Thoremadin.

What, then, is the active ingredient in this "new Thorium remedy?" Since the published report included sulphuric acid, I concluded it could only be sulphuric acid, but I was surprised when Prof. Puckner, director of the Chemical Laboratory of the American Medical Association, notified me that it contained more than 35 per cent by weight of free sulphuric acid, U. S. P. According to the analysis² of the Association Laboratory, which was carried out on a specimen labeled "Thoradin," which, according to the exploiters, is identical with "Thoremadin," the product contains approximately 35.6 per cent of free sulphuric acid, U. S. P., and 62.7 per cent of solids—to make a paste—nearly all of which is lead sulphate. Its radio-activity indicates less than 2.5 per cent of thorium.

A Sulphuric Acid Paste.

Here is a radio-active remedy with a vengeance—a "new Thorium remedy" for local application containing 35 per cent by weight of free sulphuric acid and more than 60 per cent of almost inert, insoluble sulphates to make it into a paste. It does not make much difference what else it contains beside 35 per cent of free sulphuric acid. The only part played by the solid ingredients is to hold the acid mechanically so that it will not all be free at once to attack the tissues. As a matter of fact, the paste is so full of sulphuric acid that some of it separates as free liquid, and the directions advise careful mixing before application; otherwise one might readily apply liquid sulphuric acid—which, as a matter of fact, would not be much more active. The 35 per cent free sulphuric acid in such a mixture will kill any living cells with which it comes in contact so quickly that no other therapeutic agent will have time to affect them. Only fire can easily beat sulphuric acid in quickness of destruction of living tissues. If we had enough pure radium sulphate to make a thick paste with 35 per cent sulphuric acid, the sulphuric acid would kill tissues so rapidly that there would be no time for the radium to produce any effect on the tissues to which the paste was directly applied.

According to Squibb's Memoranda, "the manufacture of Thoremadin is by no means simple; on the contrary the product is difficult to produce in a perfected and satisfactory state." I made a paste of practically the same physical characteristics as Thoremadin Paste by the following formula:

Sulphuric acid	32 per cent.
Calcium sulphate	12 per cent.
Thorium nitrate	4 per cent.
Lead sulphate	52 per cent.

In this I used 10 per cent calcium sulphate—plaster of Paris—because my lead sulphate was not in the form of a sufficiently light powder to give the same consistency as Thoremadin with the same percentage of lead sulphate. I believe it might just as well be all gypsum or all lead sulphate. The only essential thing, in order to get a paste that will destroy the tissues in the same way, is to mix sulphuric acid with an insoluble

2. The analysis follows this article.

powder into a thick paste, with just enough sulphuric acid to have a small excess free—not held by the powder. Of course the only powders practically available for this purpose are lead, barium and calcium sulphates; no other familiar powder is insoluble in sulphuric acid. The only apparatus necessary to make my paste is a pestle and mortar, a pair of scales and a vial or two; and, aside from the thorium nitrate, which costs about 50 cents an ounce and is a useless ingredient, the cost is a few cents.

The action of my paste and of Thoremadin Paste were practically identical on sheet lead, sheet aluminum, chamois skin, and the skin of my arm, and I have no doubt that the therapeutic efficacy of my sulphuric acid paste would be fully equal to that of Thoremadin Paste—but I would not recommend my paste for any therapeutic purpose; sulphuric acid is not generally a favorite escharotic among dermatologists. Thoremadin Paste will etch lead and aluminum. A piece of it, the size of a hazel nut kernel, was left in a fold of chamois skin; when I examined it fifteen hours later it had eaten a hole the size of a silver half-dollar through the chamois skin, eaten a smaller hole through a sheet of paper underneath, and etched a sheet of aluminum lying beneath that. I applied a drop of the well-mixed paste, the size of the end of a slate pencil, to my forearm, and a moment later a similar drop of my 32 per cent sulphuric acid paste. The effects of the two were identical. They were the effects of sulphuric acid—somewhat less intense than that of pure sulphuric acid. In a few seconds the familiar burning sensation of a strong mineral acid began; this continued during the application of the paste. A hyperemic halo soon developed around the sites of application. Forty minutes after applying the pastes, I removed them. Over the area covered by either paste the skin was yellowish white, bloodless, apparently depressed and evidently dead; around this central area was a slightly elevated white edematous collar one-sixteenth or one-thirty-second of an inch wide; and around the whole there was a pink erythema fading out gradually into normal color at about three-quarters of an inch from the central lesion. The effects were identical in character with those produced by the application of sulphuric acid. The burning sensation ceased in about twenty minutes after removal of the pastes, and at the same time in both lesions, leaving in both a feeling of soreness. At the next observations, twelve hours later, both lesions showed a yellowish-white area of necrotic skin, corresponding to the sites of application of the pastes, surrounded by a narrow inflammatory border. Now, six days after the application, each lesion shows a dry yellow necrotic center corresponding to the areas of application of the pastes, surrounded by a narrow inflammatory border. These lesions are not abrasions of the skin. They are sloughs going through the epidermis and well down into the connective tissue structure of the skin. The two sloughs show no difference in degree or other characteristic. There have been exhibited no variations between my paste and Thoremadin Paste in any of the experiments I made with them. Doubtless the future course of either lesion will be as follows: The necrotic area will gradually form a dry eschar, which in the course of about four weeks will separate, leaving a depressed scar.

Therapeutic Claims.

What, now, are the action and therapeutic applications suggested for this "new Thorium Remedy?" The following statements are all taken from a section referring to the action of "Pasta

Thoremadin." "According to the quality applied, its effects are antiseptic, disinfectant, dermatostimulant, epidermoplastic, and escharotic."

It is antiseptic; free sulphuric acid will destroy any living cell—bacterial or other—with which it comes in contact. In effectiveness and in freedom from selectiveness in action it compares in this respect with fire.

By the same token it is a disinfectant; it will destroy a garbage heap as effectively as a garbage burner—and the garbage can as well.

It is a dermatostimulant—if its application is measured in seconds. In rapidity of action it almost compares in this respect with the actual cautery. But as a dermatostimulant I venture to believe it is useless.

That it is, even theoretically, an epidermoplastic agent—assuming that term to mean an agent promoting the formation of horny epidermis over a denuded surface—I believe is not true.

It is an escharotic; with that claim I can make no quarrel. It will destroy any animal or vegetable tissue and all other substances except those of the strongest chemical resistance. It is an escharotic due to free sulphuric acid, and I believe I correctly state the position of most dermatologists when I say that sulphuric acid as an escharotic for therapeutic purposes has been long since discarded for various reasons in favor of less drastic and equally effective agents.

Again: "It also induces a strong inhibitive action on the formation of pathogenic cells." It will do more; it will kill any living cell, normal or "pathogenic," with which it comes in contact—skin, muscle, nerve, fascia, horn, or bone; it knows no selection in its destruction of animal cells.

And again: "Its destructive power can be entirely controlled by the physician in every respect; a thing that cannot be done in the case of arsenic, concentrated mineral acid," [Heaven save the mark!] "and strong alkalis." Its destructive action can be controlled; in one way, for example, by the application of an excess of water—so can a fire's. The statement that its action is more easily controlled than that of the other caustics enumerated is, I believe, not true.

Again: "Moreover, it is considerably more powerful than silver nitrate and other similar substances, while its toxicity is nil." It is more powerful than silver nitrate; in destructiveness to tissue silver nitrate compares with it somewhat in the same way that a road scraper does with a steam shovel.

It is non-toxic, because it immediately surrounds itself with a wall of dead tissues that prevents absorption. So is arsenious acid over areas as large as the maximum recommended for Thoremadin if used in a paste sufficiently strong to destroy tissue quickly.

What are some of the conditions for which Thoremadin or Thoradin Paste is recommended? "Skin epithelioma [no qualifications.—W. A. P.] lupus (vulgaris and erythemat.), papules, cysts, moles, molluscum, nevi and angiomata. Apply Pasta Thoremadin, etc."

In all the foregoing list, moles are the only lesions for which such a caustic paste is perhaps as good a method of treatment as ordinary methods in use, and even in them I believe it falls far below recognized methods.

Of course the recommendation in "papules," "cysts," and "molluscum" is too indefinite to be analyzed. "Papules" mean small solid elevations in the skin, such as, for example, the beginning eruption of smallpox, and I suppose neither Squibb nor Semerak intends to recommend Pasta Thoremadin for that condition, and yet such a use

would not be more ignorant or mischievous than the use of Pasta Thoremelin in many other papular eruptions.

Imagine, in this year of our Lord 1912, recommending a sulphuric acid caustic paste as a method of election for the treatment of cysts in the skin—a large sebaceous cyst, for example! Could anything be cruder?

A Vicious Recommendation.

Stronger criticism can be made against the recommendation of it in "nevi and angiomata" without qualification. Some flat nevi might be so treated with fair results, but what scarring will follow and how great will be the disfigurement from the use of such a treatment in large angiomata? How much danger will there be of hemorrhage from the sloughing of even a small cavernous angioma to which a 35 per cent sulphuric acid paste has been applied? What man who knew what he was doing would go off and leave a paste, containing a large quantity of free sulphuric acid, over a mass of cavernous angiomata to eat its way until the acid had neutralized itself?

To recommend a 35 per cent sulphuric acid paste in erythematous lupus is as bad. If I should use such a method of treatment in that condition, I should regard myself as deserving a charge of malpractice.

[To Be Continued in the April Journal.]

County Societies.

Johnson County.—The Johnson County Medical Society met in regular monthly session on March 4, a quorum being present. Resolutions were adopted amending the by-laws to harmonize with the suggestions of the House of Delegates relative to a uniform date for the annual meeting and the election of officers. The dues were increased to meet the requirements of the society.

Dr. Walter J. Hunt has moved from Edna to Hunt, Ark.

At the next regular meeting, in April, Dr. Annie Hays will read a paper on "Headaches," and Dr. W. R. Hunt will read a paper on "Erysipelas."

S. A. Cook, Secretary.

Book Reviews.

Pellagra.—By George M. Niles, M. D., professor of gastro-enterology and therapeutics, The Atlanta School of Medicine, Atlanta, Ga. Octavo of 233 pages, illustrated. Philadelphia and London: W. B. Saunders & Co., 1912. Cloth, \$3.00 net.

As this is the first book on pellagra by an American author, we should feel proud that it comes from the South, where the disease is most prevalent. The book is divided into ten chapters and is profusely illustrated,

though many of the cuts are of advanced cases and have been shown before, yet several are original and more like the early cases seen in private practice.

Chapters one and two are on general considerations, historic and otherwise, and pellagra in the United States.

Chapter three discusses the various theories as to the etiology. The author very thoroughly gives every side of the vexed question and leaves his reader to form his own conclusions.

Chapters four and five describe the symptomatology, the clinical course of pellagra and description of cases from different sources.

Of dermatological significance Dr. Niles describes a case under treatment, a young girl of sixteen, who has undoubtedly the erythema of pellagra, and yet has never had a single quail of any other bodily disturbance produced by her ailment.

The descriptions of the gastric, skin and digestive symptoms and the nervous phenomena are excellent and safe to follow.

Chapter six is devoted to the pathology and morbid anatomy of pellagra. The author states that while the pathology has by no means been worked out to any definite status, he gives a good account of the views of different observers.

Chapter seven gives the important points on diagnosis, the course and progress, and the prognosis of pellagra. Dr. Niles states that the skin manifestations are occasionally late symptoms, preceded by one or more factors, and only needed to "clinch" the diagnosis.

Chapter eight gives a very complete explanation of the treatment and discussion of different methods.

Chapter nine is on the prophylaxis of pellagra. Among other important points, he hopes that we may be able to amend our pure food laws so that corn may be frequently inspected in its journey from the field to the table, in order that it may reach the masses of our people in a harmless and wholesome condition.

Chapter ten gives a description of some recent experiments on animals and deductions therefrom.

I heartily recommend this work.

Wm. R. B.

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CONTENTS.

Original Articles:

- Infection of the Urinary Tract by the Bacillus
Coli, by St. Cloud Cooper, M. D., Fort Smith..... 285
Cancer of the Uterus and the Importance of Mak-
ing an Early Diagnosis, by E. E. Barlow, M. D.,
Dermott 290
Conservation of the Ovaries, by William Crutcher,
M. D., Pine Bluff..... 293

Editorials:

- President's Announcement..... 295
En Epistle to the Aesculapians..... 296
The Preliminary Program..... 297

Editorial Clippings:

- Thoremadin—A Typical Nostrum Put Out Under
the Honored Name of Squibb, by William Allen
Pusey, M. D., Chicago..... 297

Communications:

- Hot Springs, Arkansas, the World's Sanatorium
and Pleasure Resort, by Harry H. Meyers, Super-
intendent of the Government Reservation, Hot
Springs 293

- Preliminary Program of the Thirty-sixth Annual Ses-
sion of the Arkansas Medical Society..... 301

- Delegates to the Thirty-sixth Annual Session of the
Arkansas Medical Society..... 304

- Constitution and By-laws of the Arkansas Medical
Society 305

County and District Societies:

- Polk County..... 311
Yell County..... 311
Union County..... 311
Pulaski County..... 311
First District..... 312

- News Items 313

- Births 313

- Books Received 313

- Book Reviews 314



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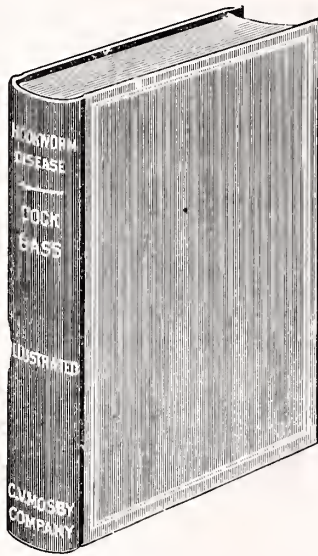
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Original Articles.

INFECTION OF THE URINARY TRACT BY THE BACILLUS COLI.*

By St. Cloud Cooper, M. D.,
Fort Smith, Ark.

Bacillus coli is universally present in the intestinal tract of man and all domestic animals. It has a wide distribution in nature, especially in soil and water. It was first found by Emmerich in the stools of cholera patients in Naples in 1884.

It is present under normal conditions in the small intestines. It is a pus-producing germ in pathological conditions. It is a short, thick, motile rod having numerous flagella. It is subject to numerous variations. It is thought that this bacillus aids digestion and is quite a factor in producing gas. It produces an acid fermentation in sugar, bouillion and gelatin; curdles milk, forms indol, and generates gas. It is found in many inflammatory processes connected with the intestinal tract.

It is often found in pure culture in appendiceal abscesses, in inflammation of the gall-bladder and peritonitis. It is an active factor in cystitis, pyelitis, and in abscess of kidney, endocarditis and pleurisy.

Robert Morris¹ says that this bacillus next to tubercle bacillus causes more deaths than any other germ; that it is a chief factor in causing arteriosclerosis, diabetes mellitus, pancreatitis, acute and chronic hepatic cirrhosis, neurasthenia, adhesions about gall-bladder and duodenum, pernicious anaemia, infantile paralysis, infections of the kidneys, ulcer of stomach and duodenum, infections of the tubes and ovaries, and when present in the vagina it causes such intensely acid secretion that the spermatozoa perish. This acid condition of the vaginal secretions caused by the bacillus coli is, in his opinion, a great factor in limiting the world's population.

Peterkin² says: "Dr. F. B. Turck has fed coli bacillus to dogs, causing duodenal and intestinal ulcers. Dr. Helmoltz, who has studied a large number of cases of peptic ulcers in children, has shown that they are due to the coli bacillus and that in one case, where death was due to hemorrhage from

*Read before the Sebastian County Medical Society, March 12, 1912.

a deep duodenal ulcer, the bacteriological findings showed pure culture of the coli bacilli. In other words, the invasion is probably hematogenous, through the organism's gaining entrance to the blood by denudation of intestinal mucous membrane.

"If we refer to Dr. Neumann's investigation the presence of coli bacilli on out-of-door objects, we shall see how we may be constantly adding to the virulence of the coli bacilli in our bodies, by introducing new strains, cross-breeding, as it were, especially by eating certain kinds of food, which Dr. Neumann has demonstrated carry this organism, especially fruit, and these experiments explain, in many cases of intestinal indigestion, as we all have observed clinically. We often get beneficial results by prescribing cooked instead of raw fruits, and why in our dietetic regime, in prescribing for coli bacilli infection, we should always prescribe food cooked, instead of raw, for this organism is undoubtedly the main factor in causing intestinal indigestion, toxæmia, etc."

In this paper it will be my endeavor to call the attention of this society to cystopyelitis due to infection by bacilli coli and to briefly report four cases coming under my observation during the last twelve months.

Wassermann³ says: "There are four routes by which an infection of the urinary tract takes place: (1) The ascending, by way of the urethra (urogenic); (2) the descending, by the way of the blood stream (hematogenic); (3) infection by contiguity, as from the rectum or any other portion of the large intestine, or directly transperitoneal; (4) through the lymphatic system of vessels."

Wassermann says, in speaking of the symptomatology: "The presence of the bacterium coli in the urinary tract may cause general or local symptoms, or both. There may be infection of the bladder or upper urinary tract without any noteworthy local symptoms, or these may be so slight as to be obscured by violent general symptoms, such as high fever, chills, general malaise, etc. Sometimes there is present only slight evening fever, with paleness, anorexia, and general lassitude of apparently unknown origin, since nothing points to the urinary organs. This is the case in adults, while in babies a high or slight fever, with continuous crying and vomiting, may mask the basic condition. Before such cases the physician

stands confronted by insurmountable diagnostic obstacles. The lungs are examined time and again, the ears appear normal, there is nothing abnormal in the throat, nor is there a suspicion of any rash. In children, especially girls, as well as in adults, this form of infection may go on for weeks or months after an undiagnosed acute attack has subsided. Young girls in whom such a chronic infection exists may suffer from exacerbations of fever several times a year without any positive local signs. In some cases, in older children at least, point to the seat of pain, complain of frequent, painful micturition (cystitis), or show some dysuric symptoms combined with pains in the back and right or left flank (pyelitis).

"It is just this irregular, ephemeral fever which puzzles the physician. Sometimes the temperature reaches, 104, remains several days at this height, and suddenly drops to subnormal. The child is afebrile for days or weeks, only to suffer a new febrile paroxysm. Again the fever curve may closely simulate malaria, and many times has been mistaken for it. Frequently, however, the fever resembles that which we see in septic or pyemic conditions."

Morse,⁴ in speaking of the symptomatology of this affection, says: "In the majority of cases there is nothing whatever in the symptomatology to call attention to the urinary tract, the symptoms being merely an elevation of temperature and those common to all febrile attacks in infancy, such as restlessness, drowsiness, fretfulness and signs of indefinite discomfort. In some cases a yellow stain on the napkin first calls attention to the urinary tract. Symptoms of disturbance of the gastro-intestinal tract are especially common. Anorexia is the rule, and is often very marked. Vomiting is not unusual. The movements are usually abnormal, sometimes as the results of some disease to which the urinary infection is secondary, sometimes as the result of the infection itself.

"The temperature is usually very irregular and in no way characteristic; suggests confined pus more than anything else. In some cases it suggests an atypical malaria. In fact, the condition for this reason is often mistaken for malaria. This is especially likely to happen when, as is sometimes the case, there are chills and sweating."

Billings,⁵ in an article entitled "Vaccine Therapy in Colon Bacillus Infection of the

Urinary Tract," says: "Colon bacilluria occurs in fully 50 per cent of all cases of bacteriuria. The condition may be unattended with perceptible effect, either local or systemic. Patients may suffer from dysuria with frequent urination, and colon bacilluria may be the recognized morbid condition. Usually the bladder irritation is ascribed to the hyperacid urine, but it may continue when the urine is alkaline. That colon infection is the chief cause of the bladder irritation is presumptively proved by the relief of all symptoms coincident with the disappearance of the bacteria from the urine."

Wassermann speaks of recurrent febrile attacks in pyelitis in connection with the menstrual period. "A patient may be improving after the first attack of pyelitis, and may even have apparently completely recovered, but when the next menstrual period occurs it is accompanied by some slight discomfort, as lumbar pains and dysuric symptoms. The next menstruation aggravates the condition, and marked pain, vomiting, dysuria and turbid urine appear, due clearly to a pyelitic relapse. Then the same treatment must be renewed. The same thing may repeat itself several times during the year, weakening the patient extremely."

"As if to complicate the picture of this enigmatic disease, it must be borne in mind that even severe cases of pyelitis may develop into and follow an afebrile course. Pain is spontaneous or elicited by palpation, is an important symptom, and aids in arriving at the diagnosis, especially in older children and adults. The right or left flank is generally sensitive to pressure in pyelitis, while there is pain and tenderness in the suprapubic region in cystitis. This help, of course, is not to be had in babies. Even in children and adults the pain is sometimes confusing and is referred to remote places." This pain is localized in the lumbar region, it is not the lancinating, shooting-down-the-ureter type, found in so-called renal colic, due to a stone in the pelvis of the kidneys. The pain is dull and located in the region of the kidney.

Diagnosis (quoting again from Wassermann).—"Colon infection has to be differentiated from numerous febrile infections. In mild form with headache, backache, slight fever and general malaise, one might mistake it for influenza. The severe acute forms, the diagnosis at first may be impos-

sible, for the disease may begin with a chill and high temperature. Severe vomiting and gastric symptoms, with pains in the epigastrium, makes one think of gastritis or gall-bladder trouble. Appendicitis is thought of when the pain is in the right flank; pneumonia if the pain radiates laterally and upward and backward. The more protracted cases of pyelitis, with general indefinite symptoms, cephalalgia and fever, often resemble typhoid fever more than anything else.

"In young girls with general poor health, with or without exacerbations of fever occurring several times during the year, pyelitis is often mistaken for anaemia, chlorosis, even latent tuberculosis or malaria, and is treated accordingly.

"The urine is the main basic point in the diagnosis of this disease. Given, a negative physical examination in a serious general condition should make us think of cystopyelitis, just as we are accustomed to think of otitis. Urine analysis should never be omitted in a case of obscure high or often repeated fever even in infancy. The urine in cystopyelitis due to colon infection is highly acid, specific gravity usually high, the urine pale or of a whitish color if containing much pus; some writers speak of the urine as being milky or cloudy.

"The examination of the urinary sediment reveals pus cells, sometimes the whole microscopical field being full of them. Here and there red cells and epithelial cells of squamous type are found, and above all the bacillus coli, sometimes, in pure culture.

"The bacillus coli often prepares the ground for secondary infection. Though the urine in cystopyelitis is usually cloudy, it, at times, may be clear, and to only examine cloudy urines would lead to mistakes in diagnosis."

Wassermann, in concluding his article, has this to say: "Cystopyelitis is a well-defined disease, both etiologically and clinically, and strikingly resembles in this respect the so-called infectious diseases. The bacillus coli communis is the most frequent organism causative to and characteristic of the disease. It is a febrile disease; the fever is often the relapsing type, extending over variable periods of time. Any obscure fever, as well as any unaccountable anemic condition in girls, with or without fever, is suspicious of latent pyelitis."

Treatment.—The treatment advised by

these authors is as follows: Frequent doses of salts to clean out the intestinal canal. Free catharsis washes out the accumulated bacillus coli in the intestinal tract. Foods well cooked and water free from contamination of fecal matter from animals. Urotropin and alkaline diuretics. Urotropin and benzoate of soda. Autogenous vaccines of the bacillus coli. Frequent examination of urine for bacillus coli.

CASE REPORTS.

Case 1. Female, aged four years. Family history negative. Past history negative. Has always been a healthy child. Has had measles, but no other disease of childhood. On May 27, 1911, awoke in the night, complained of nausea, vomited and was restless. I found that she had a temperature of 105; the abdomen greatly distended. She was given an enema of suds, which caused quite a good bowel movement and brought away a great deal of gas. Examination of throat, ears, chest and abdomen failed to discover any cause for this condition, and a presumptive diagnosis of intestinal toxemia was made. She was given calomel in small doses until she should have several free discharges.

Fever, anorexia and restlessness continued for several days; she had been given quinin and the bowels had been kept open. Daily physical examinations were made; the urine examined for albumen and sugar and found negative, it was highly acid and had a strong urinous smell.

Fever continuing, notwithstanding that the patient had been thoroughly cinchonized; a Widal test made on the ninth day was negative. Temperature was about 100 in the morning and 102 in the evening. Fever continuing another week, a tubercular test was made, which was also negative. She was given small doses of salol on account of the continued bad odor to the actions. Under this treatment she had less fever; the morning temperature usually normal and the evening temperature 100 to 101 or more. During this time several blood examinations were made, but without throwing any light on the cause of the disease. Through June, July and August the temperature ran as last mentioned.

I left the city about the middle of August and was away for two weeks. In my absence two physicians of the city were called in and treated her, and on my return I found that she still had fever. These gen-

tlemen had given quinin with no effect on the disease. Going over the case again, I came to the conclusion that she had some hidden infection, and at this time discovering a heart murmur, I thought perhaps the disease might be some obscure manifestation of rheumatism and began to give the salicylates again.

During this time the child had been allowed up a part of the day and was allowed to eat freely of good, nutritious foods. The examination of the urine always found it intensely acid, and from this fact she was put on alkaline diuretics. She began to improve under this treatment, and after four months of fever she began to get normal and picked up in strength. During the winter of 1910 and 1911 she had several spells of fever which would yield after a few days to alkaline diuretics and morning doses of salts. She was pale and anaemic in the spring and was given iron preparations. In June, 1911, she was taken to Philadelphia and placed under the care of Dr. Crozier, who soon found out the trouble—pyelitis due to colon infection. Had a microscopical examination been made of the centrifugated urine at the beginning of this disease, I would have saved the family as well as myself much trouble and worry.

She improved under the alkalies I had given her, for alkaline treatment is one of the medicines used in this disease. Occasionally she has an outbreak of the trouble, but the administration of urotropin and alkalies soon brings the attack to an end. Examination of the urine during these attacks shows the urine to contain pus, epithelial cells and bacillus coli.

The above treatment has been kept up for several months with intervals of rest between times. She is now rosy-cheeked and is in fine physical condition. Being put on my guard, I was on the lookout for the next case, which soon came along in Case 2.

Case 2. Female, aged three years. Constipated from birth, but with this exception had been well. August 20, 1911, began to vomit, was restless, bowels constipated and whole abdomen distended; temperature by rectum 104. Urine scanty and stained the napkin a deep yellow. Calomel and soda were given until several free evacuations took place. The bowel movements had an exceedingly offensive odor. With the bowel movements much gas was expelled. She continued to refuse food and ran a tempera-

ture of 100 to 102 for several days. Examination of throat, lungs, ears and abdomen failed to locate the trouble. As soon as a specimen of urine could be obtained the examination showed highly acid urine, the presence of pus and large quantities of bacillus coli. She was given Epsom salts and urotropin, which soon cleared up the urine and the attack was at an end. Six months before, this same patient had an attack similar to this one, and I feel sure that the case was the bacillus coli. Two months after this last attack she had another slight attack, which yielded to the same medicine. The mother knows the nature of the trouble, and when the child does not seem well she administers the treatment with prompt recovery.

Case 3. Mrs. M., aged 35 years. Past history negative. Was seen in consultation March 11, 1911, with Dr. Sorrells of Mansfield. When seen, Mrs. M. had just been confined with her first child a few hours before my visit and was having convulsions. Usual treatment was instituted and after twelve hours she regained consciousness. She had partial paralysis of the right side following the convulsions, which, in the course of a few months, almost entirely passed away. About a month after confinement she had a severe chill, headache and pain in the back, temperature 105. Fever, pain and anorexia would last a few days. During these attacks she was given by her physician the usual treatment for malaria. The urine during the attacks would be thick and had a bad odor. She would have these attacks of chills and pain in back about every three or four weeks, notwithstanding her physician gave her active anti-malarial treatment for several months. She came to me and I put her on anti-malarial treatment, though the malarial parasites could not be found in the blood after several examinations.

She got no better and still had the chills and fever every three or four weeks. An examination of the urine now showed the cause of the trouble. Acid urine, pus and swarms of bacillus coli. She was given treatment for this condition and has not had any attacks since, now going on four months. Several examinations of the urine since being put on urotropin and alkalies show a few bacillus coli now and then.

Case 4. Mrs. H., aged 26; mother of three children. Had always been in good health until her last confinement in January, 1911.

About three weeks after she was confined she had a severe chill with intense pain in the region of the left kidney. Her temperature at this time was 104. These chills and fever continued at intervals, which showed bladder infection. She was given large doses of quinin for supposed malaria. Her urine was examined by Dr. Dinwiddie, who reported that the urine was characteristic of pyelo-nephritis. During the summer of last year she went to Colorado and was treated there by a physician who washed out the bladder and gave urotropin. Under this treatment she improved, and when first seen by me on her return, could hold her urine four or five hours during the night, but had to urinate about every two hours during walking hours. She states that since she has been taking urotropin she has had no more chills or fever or pain in the side. Urine drawn from the bladder was acid, contained a few pus cells and a goodly number of bacillus coli.

I learned on questioning her that her nurse had given her several vaginal douches with the rectal tube of the syringe without sterilizing it. This may be the source of the infection; anyway, she would have a splendid opportunity to become infected from this criminal use of the tube. This patient was only under my observation for a few days and returned to her home in an adjoining town. I have not heard from her since. I can look back over the cases that have passed through my hands during the past several years and recall quite a number of cases like those described, especially in female children, in which I believe I can say were infections due to bacillus coli, and which were unrecognized by me.

The microscopical and bacteriological examinations of these cases were made for me by Dr. Wood, Dr. Claxton and Dr. Dinwiddie. It has been said that when a physician is on the lookout for a disease he can find it, and the more he looks the more he can find of that disease. Without the use of the microscope this disease cannot properly be diagnosticated.

The recognition of this disease emphasizes the importance of examining urines; not only by examining for albumen and sugar, but to make microscopical examinations as well.

A celebrated Scottish clinician said that when he died he wished inscribed on his gravestone the following words: "He fed fevers." Another physician, an American,

remembering what this Scottish physician had said in his remarks about the importance of feeding fevers, and to impress the minds of his hearers on the importance of urinary examinations, said on his epitaph he wanted it said of him, "He examined urines."

This brings to us this fact: The closer a physician examines his patient, the better it is for the patient and the better it is for the reputation of the physician. A complete physical examination with laboratory aids is the only way to arrive at a correct diagnosis. Since writing the above I have seen two other cases of this affection in consultation with other physicians, the histories of which are, in brief, as follows:

Mrs. S., aged 22. About three weeks after marriage had a chill, followed by high temperature; complained of pain in right lumbar region and in right flank. Pain was like that seen in renal calculus, but not so severe, as one-fourth grain of morphin would relieve for 24 hours. She was tender on pressure. The appendix had been removed several years ago. She gave a history of constipation before the attack came on. The attack continued for a week when I saw her in consultation and suggested to the attendant that we have the urine examined for bacillus coli. This was done and the urine found to be swarming with this organism. She was put on urotropin and alkalies and was soon out of bed in her usual good health.

The other case occurred in a young woman, pregnant eight months. She had been having chills and irregular fevers for six weeks, with pain in the left side and back. She had been energetically treated for malaria without any benefit. Examination of the urine showed highly acid urine, pus cells and swarms of bacillus coli. She was put on urotropin and benzoate of soda, with rapid recovery, which was very gratifying to her and her medical attendant. Since the attention of the medical men has been directed to the ravages of this bacillus, no doubt the next few years will throw a great light on many obscure conditions in animal as well as vegetable life.

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CANCER OF THE UTERUS AND THE IMPORTANCE OF MAKING AN EARLY DIAGNOSIS.

E. E. Barlow, M. D.,
Dermott, Ark.

Cancer of the uterus is an affection which was known to Hippocrates and many other ancient medical writers, therefore we are not discussing a new disease, nor is it the purpose of this paper to advance any new ideas relative to uterine cancer, but merely to review what has been written and point out the essential symptoms which go to make up the early diagnosis.

The uterus being the most frequent seat of primary cancer, and the disease in that region so prevalent, no general practitioner passes a year without having an opportunity of observing one or more cases in his own practice. It would seem very important, then, that the general practitioner should be well informed on all its diagnostic features, for the recognition of this dreadful disease in its early stage depends largely upon him. It is he who must also care for these poor creatures where the disease is not discovered until it is too late to adopt radical means of relief, as well as those in which it recurs after a futile operation.

In making a diagnosis of cancer of the uterus there are three things most important: (a) The clinical history, (b) local signs, (c) a microscopic examination of the pathological findings.

In taking the history, the first thing to consider is the age of the patient, as statistics show that cancer of the uterus is most frequent about the time of the menopause. It is pretty well agreed that the injuries sustained by the uterus during parturition render the cervix unusually susceptible to cancerous diseases during the years when the degenerative changes accompanying the menopause are taking place. Before the

menopause the number of cervical cancers is relatively larger than the cases of cancer of the fundus, whereas after the menopause it is quite the reverse.

I find a few cases reported where the disease began as early as twenty years of age, others between twenty and thirty, but this is exceptional, not many cases beginning before thirty-five or after sixty. A vaginal discharge is present in all cases of uterine cancer, and it may be the first symptom of the disease. Where the disease is of the body of the uterus, the discharge may appear before the hemorrhage.

This discharge is thin, watery, colorless, irritating, and sometimes has a characteristic odor. Sometimes it is purulent and stained with blood. We have all heard of the characteristic odor of cancer, and if once recognized would never be forgotten. This has been instilled into every medical student since the days of Hippocrates as a pathognomonic symptom, and even now, in this progressive age, we have some men in our ranks who wait for the characteristic odor to make a positive diagnosis, not having learned that the bloody, foul-smelling ooze characterizes the last stage of a cervical cancer, and is absent in the incipient stage. As a rule, menstruation is usually regular until the cancer begins to become active; then it is usually profuse. In patients who have passed the menopause before the cancer appears there is a history of normal menstruation up to the time of the menopause, and there seems to be no relation between menstruation and the occurrence of cancer.

Hemorrhage is one of the most important symptoms of uterine cancer, and should not fail to receive immediate attention. In cases coming on before the menopause, it may occur with the menstrual periods, either as an extension of duration of an increase in amount, or there may be more or less profuse hemorrhage during the intervals.

In cervical cancer the hemorrhage is likely to come suddenly after the act of coitus, lifting a heavy weight, or following defecation. Hemorrhage is a more frequent symptom in cervical cancer than in cancer of the fundus.

Next in importance as a symptom of cancer is pain. This may be absent, and usually is in the early stage, but as the disease progresses there is a persistent, dull, heavy pain in the back and cramp-like pains in the uterus, and, as the tumor enlarges, making

pressure on adjacent organs and nerve trunks, the pain extends to the thighs and knees, following the course of the sciatic nerve.

These patients do not become emaciated until the disease has made some progress, the degree of emaciation depending upon the direct effect of the disease on the body, the absorption of toxins and the ability of the patient for taking food.

The skin presents a peculiar lemon-colored appearance, characteristic of malignant diseases of all kinds. This is due to the fact that more nitrogen leaves the body than is taken in, but, like emaciation and the characteristic odor, it is a symptom of the latter stage.

We find two kinds of uterine cancer: (1) Those beginning in the cervix, affecting the glands early and spreading rapidly to adjacent tissues; (2) those that begin in the fundus, growing slowly, affecting the glands and spreading to adjacent tissues only in the latter stage.

The information obtained by vaginal examination will vary greatly, according to the stage of the disease.

In the first stage the cervix is indurated, has a slightly glazed appearance, and may appear nodular and puffy. It is usually slightly enlarged, with one or more large vessels coursing over it. There may be teat-like processes projecting from its surface. The examining finger may bring away a little blood, which is most significant. In the second stage we find a different picture. The growth has begun to break down and disappear, the cervical lips are very much swollen, and within the margin is an uneven, rough, scooped-out area, which is readily detected by the examining finger, the induration by this time having extended out into the vaginal vault and down its walls. As a rule, the body of the uterus remains unchanged in a cervical cancer; a speculum examination at this stage will show a bloody, ragged excavation covered here and there with necrotic tissue. In the third or last stage of a cervical cancer we find no trace of the cervix; the vaginal vault is occupied by a hole, which is surrounded by hard, nodular tissue. It is in this stage that there is an extension to adjacent structures. Here we get our frightful hemorrhages and the odor which is so characteristic of the later stage of cancer. In the more advanced last

stage all anatomical relations are lost, and the entire vagina is choked with the cancerous process.

Cancer of the body of the uterus is found in women of forty and older, rarely occurring in women under forty. The uterus is usually enlarged, although not always, and the cervix is rarely involved. The hemorrhage is persistent, lasting ten days or longer, and is painless. The discharge is apt to be dark, and often watery, and has no odor until the last stage of the disease. If a patient should come to us giving an account of having passed a normal menopause—one, two or three years previous—and that three months ago she noticed a slight pinkish discharge, and a month later she had what she thought to be a normal menstruation, and a month later she had a profuse hemorrhage lasting ten days or longer, it should at least arouse our suspicion of cancer of the fundus, and no time should be lost in making a diagnosis, no matter how trivial the cause might be. A microscopical examination of the scrapings of the endometrium is the only means of making a positive diagnosis of cancer of the body of the uterus, and whenever there is the slightest reason to suspect cancer of the fundus the uterus should be curetted at once and examined by a competent pathologist.

Permit me to repeat that in the early stage of either form of uterine cancer a positive diagnosis can only be made by the aid of the microscope. If the examination proves the presence of cancer in either case, a radical operation should be performed without delay.

Again, whenever a woman between thirty and sixty years of age comes to us complaining of a vaginal discharge, increased menstruation and pains in her pelvis, we should examine her at once on a suspicion of cancer. The old-fashioned method of treating her locally with caustics, etc., for ulcer of the cervix cannot be too strongly condemned, for we must not forget that a true ulcer of the cervix in a woman of this age is practically always cancerous, and should bear in mind that an erosion is not an ulcer.

If, after examining the cervix, you find no evidence of cancer and no definite cause for

the symptoms, you should curette the uterus and examine the scrapings under the microscope.

One of the most potent causes of failure to recognize cancer of the uterus in its early stage is neglect on the part of the patient to apply to the physician for advice until the disease is so far advanced that operation offers no hope.

Again, many cases become the victims of incompetent doctors, who temporize by treating them tentatively for a time in the hope that the symptoms may subside, but they do not subside. The cancerous process goes on and on, and finally, when these poor creatures awaken to find they have been the prey of the vultures of ignorance, it is too late for even the most radical measures to avail anything.

It is not expected that every doctor should be competent to do a hysterectomy for the radical cure of uterine cancer, but every physician should be sufficiently well informed in all the diagnostic features to enable him to recognize this dreaded disease in its early stage.

It is our duty as general practitioners to educate the public mind on this most important question. It is important on account of the prevailing impression that a vaginal discharge and irregularities of menstruation are features of a normal menopause, and must be accepted as a matter of course, and we, as physicians, are too free to advise our patients that such irregularities are only a part of the normal menopause, even metrorrhagia receiving surprisingly little attention.

There can be no doubt that the most important agent in the instruction of the public is the family doctor. He is the first to be consulted, no matter what the ailment may be. He holds the key to the family secrets. If he would take advantage of the opportunity offered him by such relations and point out the significance of vaginal discharge, hemorrhage and pelvic pains occurring at or about the time of the menopause, he would do more toward lowering the death rate due to this dreaded disease than can be done by any other means now at our command.

CONSERVATION OF THE OVARIES.

William Crutcher, M. D.,
Pine Bluff, Ark.

A great change has come over the surgery of the pelvis as it pertains to the ovary. From McDowell, in 1809, to the dawn of the antiseptic era, he was a daring operator who undertook to remove even large ovarian cysts where it was a question of removal or death. With imperfect ligatures, poor technique and dirty instruments, it is a wonder that Atlee made the record and reputation that he did make.

After Pasteur and Lister it became so easy to remove the ovaries that many were sacrificed that should have been left. I hesitate to say that many needless ovariectomies were caused by the eagerness of operators to make a reputation. It would be more charitable to attribute their "first hundred" cases to lack of knowledge of the physiology and pathology of the ovary. It was known, of course, that removal of the ovaries prevented further child-bearing, and usually produced a cessation of menstruation.

But little was known of the ductless glands, hormones were not even imagined, and he would have been considered a dreamer who spoke of the internal secretion of the ovary. Furthermore, the relation of the ovary to the nervous system and the influence of pelvic diseases and lesions upon the digestive functions led to many conditions being charged to the ovary that should have been charged elsewhere.

Those of us who have seen a large ovary, possibly cystic, possibly congested, come down after treatment of the uterus, and perhaps plastic operations on the cervix and perineum, know that this must have been true.

Byron Robinson and the other great pupils of Tait were the first in this country to call a halt in the sacrificial surgery of the ovary, and Robinson, in particular, preached the doctrine that the uterus was the *fons et origo* of most pelvic diseases.

During the past ten years the surgeons, the physiologists and the pathologists have been busy, and the knowledge they have developed and the methods they have devised for the conservation of the ovary amount almost to a revolution. So impor-

tant is this subject that nearly all the last session of the American Gynecologic Society was devoted to it.

While our knowledge is yet far from complete, we may state the consensus of opinion concerning the functions of the ovary as follows:

1. The egg-bearing function.
2. A sexual function. While the ovary has little to do with sexual appetite, it exercises a general sexual influence, rounding out the qualities essential to high reproductive power.
3. The menstrual period is probably dependent entirely on the ovary. (See Case No. 2.)
4. A balancing effect on the internal secretions. (See Case No. 1.)

The present status of ovarian surgery may then be summarized from these postulates:

1. The ovaries should be removed when so diseased as to destroy their function or make their presence a menace to health. It is manifestly bad surgery to leave diseased tissues, unless inoperable for other reasons, or so slightly damaged as to make removal the worse of two evils. Ovaries that are merely pus honeycombs, or pus sacs, or malignant, should come away. In young women, and many older ones, it is best, where the tubes are involved, to remove the uterus also. Supravaginal hysterectomy has long been advised here, but the intractable discharge that follows in so many cases has led me lately to do a combined operation, releasing the broad ligament and tying the uterine artery before opening the abdomen, in order to effect complete removal of the uterus with less risk.

2. The ovaries, or some portion of one, should be left in all possible cases during the sexual life of the woman. It is surprising how small a piece of ovary can preserve the nervous system and hold the balance of the internal secretions. All sorts of puncture and resection operations may be done, even though they involve deep sutures without apparent harm. There is but one proviso—the blood supply must not be cut off. Reynolds, of Boston, reports 110 such operations done for the purpose of relieving dysmenorrhoea and various nervous disorders. He reminds us that Battey's principles were well founded, but that Battey's operation was due to undeveloped

technic, and seems ridiculous now. And he shows splendid results from so-called conservative operations. These consisted in excision of a portion, puncture of a sac or sacs, splitting of the ovary to get at internal cystic portions, and other methods devised to fit the individual case. Nearly all of the cases of dysmenorrhoea were cured or improved, but the effect in nervous cases was not good. In some of his cases only the hilum was left, and yet no apparent change occurred in the functions of the ovary.

Bearing on these ideas, I beg to report two cases:

Case No. 1.—In November, 1910, I was called to see Mrs. J. W., age thirty-two; mother of two children, the youngest four years old; a victim of four abortions, some of them induced. She was in collapse, and, having suffered pain for several days in the right iliac region, gave the impression of ruptured pyo-salpinx, tubal pregnancy or appendix. No operation was thought of and no careful examination could be made because of tenderness. Temperature remained normal or sub-normal throughout a slow convalescence. In December I opened the abdomen, removed both tubes and ovaries, the tubes being immense and the ovaries riddled with pus. Immediate con-

valescence was perfect, but after going home she had, during six weeks, four hemorrhages from the bowel, all of them large, and one of them being almost fatal. Under persistent thyroid treatment her system seemed gradually to recover its balance, and she is now well.

Case No. 2.—Mrs. T. H. B., age thirty-five, had for several years suffered occasional pelvic crises, accompanied by pain and fever. Diagnosis pyo-salpinx. I operated in December, 1911. The right ovary and tube, the left tube and three-fourths of the left ovary were removed. The uterus was not disturbed. The entire left ovary would have been removed, but that it was firmly anchored to the sigmoid and seemed to have sufficient blood supply. It was the lesser of two evils to leave it, as it was not as badly diseased as the other portions, and I felt that nature could be trusted to take care of it. This woman has been well since her operation, and has menstruated regularly.

ST. LUKE'S HOSPITAL.

This number of the Journal contains a supplement descriptive of St. Luke's Hospital. Dr. Runyan is to be congratulated for his worthy enterprise.

THIRTY-SIXTH ANNUAL SESSION

OF THE

Arkansas Medical Society

HOT SPRINGS, MAY 13-16

ARLINGTON HOTEL HEADQUARTERS

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OF THE

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All communications to this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the State. Notice of deaths, removals from the State, changes of location, etc., are requested.

ADVERTISING RATES.

A schedule of rates will be furnished upon request.

CHANGE OF ADDRESS.

Change of address will be made if the old as well as the new address be given.

ANONYMOUS COMMUNICATIONS.

No anonymous communications will appear in the columns of this Journal, no matter how meritorious they may be.

NOTICE.

All changes of address should be sent to Dr. C. P. Meriwether, secretary of the State Society, as he furnishes the mailing list each month of our members. All communications for publication should be sent to the editor not later than the 5th of each month.

Editorials.

To the Members of the Arkansas Medical Society—Greeting:

I have been requested by the editor to write a few lines for this number of the Journal, as it will be the last one published before the annual meeting of the State Society next month at Hot Springs. I am advised by the very worthy secretary, Dr. Meriwether, that all arrangements have been completed by the Hot Springs-Garland County Medical Society, under whose auspices the meeting will be held, and that not only are the members of the local organization looking forward to the meeting with the most pleasant anticipation, but the entire citizenship of the city is participating in this feeling. This unanimity of feeling presages a successful meeting, at least from the social standpoint.

It would be a matter of sincere regret if the attendance at the coming meeting fell

short of the Fort Smith meeting, and those of you who had the pleasure of attending that meeting will recall that from many standpoints it was one of the most successful ever held. There are many reasons why each member of the society should make an effort to be present at the Hot Springs meeting and contribute to its success; but there is one above all others which should impel an extraordinary attendance, for it is a fundamental one and should be thoroughly understood. I refer to the organized and unscrupulous movement to undermine the faith of the common people in the unselfishness, humanitarianism, honesty and sincerity of the physician. The medical profession is charged with being a "trust" and of operating in restraint of medical freedom. The indictment has been made by an organization which, at this very writing, is carrying on in this State a propaganda of slander, misrepresentation and contumely. If the charges made by this organization are true, then the Arkansas Medical Society should dissolve. This matter concerns each member of the society individually, and you are invited and urged to come to Hot Springs and defend your personal and professional honor. The National League for Medical Freedom will have its ear to the ground while our meeting is in session, and if any good news reaches its ears it will be because of a downright and inexcusable indifference of the membership.

A perusal of the preliminary program indicates that it is quite complete and should prove scientifically interesting. The Program Committee and the section officers are to be congratulated on their work. Many distinguished visitors have accepted invitations to be present and contribute articles. Notable among them are Dr. Isadore Dyer, dean of Tulane University; Dr. C. W. Allen, one of the leading young surgeons of New Orleans, Dr. E. S. Lewis; Dr. E. S. Judd of Rochester, Minn., assistant to the Mayos; Dr. W. S. Leathers of Jackson, Miss., a leading sanitarian of the South; Dr. W. A. Evans of Chicago, the foremost public speaker in America; Dr. C. C. Conover of Kansas City and Dr. J. M. Coyle of Nashville, Tenn., medical director Tennessee Life Insurance Company.

The State Board of Health proposes to have a sanitary exhibit during the meeting. Exhibits have been loaned from all the

Southern states for this purpose. There will be two public meetings which ought to prove of keen interest to the laity. In short, I have no hesitancy in saying that the best program ever prepared will be submitted for your enjoyment, and to remain away in the face of all these good things prepared for you is no less than an insult. Come prepared and determined to take part in shaping the policies and destiny of your State Society.

I desire to impress upon the delegates who have been elected by their county societies the importance of being present on Monday, the 13th, as the House of Delegates should finish the business on that day. Important committees will report early, so that sufficient time may be allowed for deliberate and intelligent discussion. The Committee on Medical Legislation will present a copy of a proposed bill creating a department of health for discussion by the House. If there is a member of the society who desires to assist in the shaping of this bill, he should be present; there should be no complaint from those who remain away. Unfortunately, there are a few members who do not feel kindly toward the bill, but they are invited to give the committee and the House of Delegates the benefit of a frank discussion of their objections.

It is indeed gratifying to me to be able to state that there have been three new county societies organized since our last meeting, and it is quite safe to say that there will be two more before the meeting. This means that the councilors have been doing their duty. The chairman of the Council has prepared an interesting report which will be read before the House of Delegates.

Do not forget the place—HOT SPRINGS, nor the time—MAY 13, 14, 15 AND 16. Begin now to have your labor cases postponed until after the meeting. A week's rest will help you, and your friends will be delighted to contribute to your pleasure. Let us all make a strong effort to get there on the first day and remain until the last bubble has bursted.

Morgan Smith, President.

AN EPISTLE TO THE AESCULAPIANS.

(By One of the Apostles.)

Know ye, my brethren, that in the year of our Lord nineteen hundred and twelve,

in the month of May, on the days of the thirteenth, the fourteenth, the fifteenth and the sixteenth,

In the city of Hot Springs, in the Valley of Vapors, in the county of Garland and in the land of Harry Myers and his sons and daughters,

That the disciples of thy father Hippocrates will gather together for counsel, meditation and rejoicing; the time being the yearly festival of the faithful and of the elect.

Prepare ye now, my dearly beloved, to go unto your brethren in the city of springs, in the month and on the days hereunto spoken of, and partake of the many and divers good things prepared for thee by thine exceedingly prodigal brethren.

Great and good men shall come from the North and from the South: from the East and from the West will they also come; men of great understanding are they, for I say unto thee, they are the teachers of men; by the people are they loved and respected. Their hearts are warm with brotherly love, and out of their mouths proceed words of wisdom.

Having sufficient authority given me by the fathers and the statutes, I charge ye to do thiswise and straightway keep this command:

Go, get ye out into all the cities and into all the towns, yea, unto the uttermost parts of the State go ye; seek out a brother of the faith and command him, saying:

Brother, the day and the hour is nigh at hand for the yearly festival; gird up thy loins; yea, with a strong girdle gird thee up thy loins; with such raiment as thou hast or canst borrow of thy neighbor, quickly get together in a handbag;

Put a few shekels of silver in thy purse for passage over the wicked ways, and hie thee to the festival of the faithful and the elect. Look not behind thee lest some enemy attempt to detain thee unduly.

Let not thy wife, nor thy mother, nor even thy mother-in-law, nor thy sweetheart, nor thy manservant, nor thy maidservant, nor thy swine nor thy neighbor's cattle, nor any living creature or thing, born or yet unborn, persuade thee from thy journey. Shouldst thou have to pass through a great place called the City of Roses, hard by a river, I warn thee not to tarry too long within its

borders, lest ye be late at the festival and in no condition for rejoicing.

When thou arrivest in the festival city thou wilt find the gates ajar and voices of welcome proceeding from the housetops.

Thy brethren of the city will await thee in their tents; their bread will they break with thee in the morning, at noontime and in the eventide.

Before thee will they set flagons of great dimensions, filled to overflowing with sparkling wines, the which thou mayest partake for thy stomach's sake; yea even unto merrymaking. In thy rejoicing thou wilt forget the dull cares and buffetings of the day. Thy heart will wax warm with brotherly love and kindness; yea, thou wilt even forgive thine enemy seven times seven, so exceedingly warm will it wax.

The days will be filled with labor of love, and the nights with rejoicing. Thine ears will be ravished with sweet strains of music: the harp, the cymbal and the flute will they give up their harmony for thy pleasure.

At the flowing fountains thou mayest drink of the *radiant* waters, in the which thou wilt find the glowing warmth and generous spirit of thy brethren, thy hosts.

There will be no strangers within the gates, but all brethren; in harmony, peace and concord will they dwell throughout the days of the festival.

Break not this commandment, my brother, lest thy conscience prick thee all the days of thy natural life; for verily, verily, I say unto thee, that if thou keepest not my words, it were better that thou hadst never been born;

For the many and divers good things stored up for thee in the city of vapors will not again be seen by men: the good things in the city of the boiling waters, in the land of Harry the Myers and of his sons and daughters, in the Year of our Lord, Nineteen Hundred and Twelve;

In the Month of May, on the Day of the Thirteenth, it being the first day; on the Day of the Fourteenth, it being the second day; on the Day of the Fifteenth, it being the third day; and on the Day of the Sixteenth, it being the fourth and last day.

And now, my dearly beloved brethren, this is the last epistle I shall send thee before I meet thee in person and talk over some things which concern our welfare: I pray thee to keep steadfast in the faith and do the things herein commanded that thou

mayest be honored among men and exalted by thy brethren.

THE PRELIMINARY PROGRAM.

This number contains the preliminary program of the Hot Springs meeting. Read it carefully and see if there is not some subject to be discussed which is of special interest to you. Look over the list of contributors and see if there is not someone whom you should honor by your presence. Reflect on your duties as a physician and a member of this society, and ask yourself this question: "Should I spare one week from my practice, attend the meeting and contribute my mite to its success, or should I stay at home, hoping thereby to get a case from my competitor's patients while he is at the meeting? Duty points the finger straight at you to do the former. Come to the meeting and your conscience will applaud the act.

Editorial Clippings.

THOREMEDIN—A TYPICAL NOSTRUM PUT OUT UNDER THE HONORED NAME OF SQUIBB.

William Allen Pusey, M. D.,
Chicago.

[Continued From the March Journal.]

We have seen that Mr. Semerak has said over his signature that "in many hundreds of patients, including cases of lupus, * * * I have not found more than from 3 to 4 per cent fall short of a good result. These failures were all cases of epitheliomata * * *." That is tantamount to saying that he has had no failures in his attempts to treat lupus. Presumably he means lupus vulgaris, but whether he means lupus vulgaris or lupus erythematosus, the statement is worthy of no more consideration than a claim to have an invariably successful treatment for pneumonia or typhoid fever. That the treatment is one that would compare in efficiency with methods now in use in lupus vulgaris is not, in my opinion, worthy of discussion.

That the paste can be used to destroy many epitheliomata I do not doubt, but that it has any superiority over "arsenic, concentrated mineral acids and strong alkalies" I do not believe. Sulphuric acid is not new as a caustic, and as a result of long experience dermatologists who use caustics have for the most part come to the conclusion that the preferable ones for use in epithelioma are arsenious acid, chlorid of zinc, caustic potash, and acid nitrate of mercury. I know of no dermatologist—or even "cancer specialist," that matter—who prefers sulphuric acid.

These are only examples of the condition which Thoremadin Paste is recommended. I recommend that this paste, which will peel slough in the skin that takes two or three days to separate, and that will be followed by a new growth, be applied "lightly" to the indurated area, and they minutely describe how it applied over the surface exposed after the removal of a cancer.

What Does It All Mean.

There would, however, be no reason for criticizing anything more than their judgment if Squibb & Sons offered their paste as a sulphuric acid paste for the treatment of epitheliomata and other things. As a matter of fact, Squibb's acid nitrate of mercury is well known as an agent for the treatment of epitheliomata, which has been long recommended and used with great effectiveness by Dr. Samuel Sherrill in particular. But what shall we think of E. R. Squibb & Sons offering a 35 per cent sulphuric acid paste as a "new Thorium Remedy" for the treatment of epitheliomas and birthmarks and heaven knows what ("papules," "molluscum," etc.), and as a substitute for "postoperative radium treatment," and for "X-rays in postoperative treatment for neoplasms?" What has come over the house? The firm had a reputation for anybody to cherish with pride. E. R. Squibb is really a great name, and for half a century the firm of Squibb held the unquestioned confidence of the medical and pharmaceutical world. Have all of the traditions of the firm been suddenly thrown to the winds? Have its members determined all at once to embark on a career of exploitation of proprietary remedies under misleading names and of mischievous properties, whose composition it is not for the good of us of the profession to know, instead of zealously pursuing, as of old, the business of manufacturing drugs and chemicals of known composition and of unquestioned "Purity and Reliability?" Has the result of sixty years of experience with the medical profession been so poor as only to lead to the conclusion that the old policy is not profitable or not worth while? As a matter of fact, is there a drop of the old Squibb blood in the firm? These are not useless questions, and the medical profession has a right to raise them.

Analysis of Thoradin (Thoremadin).

The following is a summary of the report of the Chemical Laboratory of the American Medical Association on the substance discussed by Dr. Pusey in the preceding article. The details of analysis will appear in the annual reports of the Chemical Laboratory. It will be noticed that the package analyzed bore the name Thoradin, whereas Dr. Pusey refers to it as Thoremadin. This is explained by the fact that, as announced by E. R. Squibb & Sons, they have recently changed the name of the product.

An original package of Squibb's Thoradin was purchased on the open market and analyzed in the Association's laboratory, with the following results:

Thoradin is a white, odorless, semi-liquid mixture, which, on standing, settles, showing a clear liquid in the upper part of the bottle. On account of the small amount of material and the difficulty of mixing thoroughly, the entire contents of the bottle was washed out with water, filtered, and the insoluble matter thoroughly washed, dried and weighed, and the filtrate made up to a definite volume. In this way Thoradin was divided into two parts, soluble and insoluble.

The insoluble matter was found to constitute per cent of the whole, and of this, 61.09 per cent was found to be lead sulphate. The difference 0.73 per cent, consisted of a substance which responded to tests for thorium or related

soluble portion responded to tests for sulphur, but only faintly to tests for hydrochloric and nitric acids. By filtration and sulphate tests, the sulphuric acid content of Thor-

adin was found to be equivalent to 33.06 per cent absolute, or 35.58 per cent sulphuric acid, U. S. P. The residue left on evaporating some of the solution of the soluble part, after gentle ignition, was found to be about 0.90 per cent of the whole; of this a small part was lead sulphate. This residue responded also to tests for thorium or related metals.

Assuming that all of that part of the insoluble matter which responded to thorium tests and all of the soluble matter not proved to be lead sulphate was entirely sulphates of thorium or related metals, the total content of these constituents could not be more than about 1.63 per cent.

Since the work of Professor Gale, on the radioactivity of Thoradin, indicated less than 2.5 per cent of thorium salt, and the results of the chemical examination indicated at most 1.63 per cent thorium salt, it was not considered of sufficient importance to isolate and determine separately thorium or other related metals.

From the above examination we conclude the composition of Thoradin to be essentially the following:

Sulphuric acid, U. S. P.....	35.58 per cent.
Lead sulphate	61.09 per cent.
Sulphate of thorium or related metals, not over.....	1.63 per cent.
Hydrochloric acid	trace.
Nitric acid	trace.
Water (by difference)	1.70 per cent.

Total100.00 per cent.

—Journal American Medical Association.

Communications.

HOT SPRINGS, ARK., THE WORLD'S SANATORIUM AND PLEASURE RESORT.

By Hon. Harry H. Myers, Superintendent of the Government Reservation, Hot Springs, Ark.

According to story, tradition and song, the Arkansas Hot Springs have been noted and famous for centuries. That the first Americans, the Red Men, knew of and were liberal patrons of this now world-celebrated resort there can be but little doubt. It is a tradition here that these Hot Springs were used by the many Indian tribes as a truce ground where the sick and afflicted came for relief, and where the instruments of warfare were stacked and the pipe of peace smoked until health was restored. It is equally true that these wonderful springs of health-giving wonders was the Fountain of Youth so much sought by that grand old cavalier, Ponce de Leon, and this was the objective point he had in view when he sailed from sunny Spain and landed on the coast of Florida seeking some waters where it was understood, even at that day, youth

would be restored and life again made worth while by health.

During President Jefferson's term he sent representatives of the government here, and an investigation of the waters and surrounding country was made, but nothing further looking to the government taking over the springs was done until 1832, when, by act of Congress, the four sections embracing especially Hot Springs Mountain, on which the springs are located, was reserved forever for the use and benefit of the whole people. Again lethargy smothered governmental initiative, and nothing further was done to effect local conditions until 1877, when Congress authorized the sale of lots here, and, it may be said, assumed the management and control of the water, which had heretofore been used at pleasure. A small town had grown up, occupied by squatters.

At the present time it may be said that the government is in absolute control of and supervises the administration of every bathing house and affords every protection to the visitor.

There are on the east, or Hot Springs Mountain, a total of forty-nine hot springs, which have a daily flow of approximately one million gallons of water, which comes out of the earth at an average temperature of 140 degrees F. This water is used first by gravity, where practicable, by the several large bath houses, and is then impounded in several large reservoirs, from whence it is pumped to the other bath houses which are not accessible for gravity supply, so that the water used by all the bath houses is the same. There are, all told, twenty-four bath houses, and last year there were given over a million baths. The current year will exceed this considerably, and the popularity of the resort is growing each succeeding year. The government maintains a free bath house where baths are provided for the indigent of every race and clime, free of cost, and last year there was an excess of 225,000 baths given at this house. On some days we have bathed there over 900 of the poor and afflicted.

Always alert and watchful for the best interests of the people, the government will not permit a physician to prescribe the baths who does not stand an examination before a Federal registration board, and there

are 138 registered physicians practicing in Hot Springs. I do not hesitate to say that no other city or resort in the world can show a higher class, more competent or skilled lot of physicians than are to be found here; and I know of no place where the same care, efficiency and skill can be commanded and the results achieved for so little expense as here. Experience has proven beyond question that the best results always follow by bathing under a physician's prescription.

In 1898 the government sent Prof. Boltwood, an eminent chemist, here to investigate the source and cause of the water being hot. The result of his investigations was that it was heated by radium, and contained to a marked degree a radio-gas, an emanation of radium. Another scientific investigation is now contemplated by the government to determine to what extent radio-gas does exist and the effect of its use on the human system. This research will be of vast interest and importance, and it is hoped it will materially add to the wonderful achievements heretofore had by the baths. That old Mother Nature, the most wonderful of all chemists, has compounded beneath the earth, in a workshop or laboratory of her own deep designing, a wonderful mixture, is not denied; that its marvelous curative powers are as startling and wonderful as its source is mysterious is equally true. Scientists may conjecture, research may be confounded, and we may wonder, but the waters bring health to tens of thousands every year. During the two years I have been superintendent of the reservation there have been brought to my notice hundreds of cases of the halt, the lame and afflicted in every walk and station of life, restored to complete health. As this article is to be published in a journal to be read especially by doctors, let me digress sufficiently to say that I believe when the time comes when the recording angel strikes the balance of good, evil and indifferent in your lives, that the bright spots and saving clauses in many instances will be that in life you exercised that good judgment and proper knowledge of the curative waters of these Hot Springs to have never failed to send your patients here for health.

These waters make the well weller, the sick well, the vigorless full of vigor, and, in fact, will add many happy years to the life of every individual who will take baths here just three weeks of each year. That with its superb climate and these springs it was the intention of the great Creator that, by reason of the beautiful surroundings, Hot Springs should be a health resort—and it is a health resort, first, last and all the time, and should never for a moment be considered as anything but a health resort—there can be no doubt. Beautifully located, nestling as it does amid the Ozark Mountains with the confidence and calm serene beauty of a child nestling in its mother's arms, it is and may be justly said to be an ideal place for rest and the restoration of health. These beautiful mountain peaks are not rough and rugged, but are studded with a luxuriant growth of a virgin forest, where stand the majestic pine and sturdy oak, and, as they are kissed by the passing breezes, sway and sing a melody of God's great gift to man—these wonderful hot waters.

The government has constructed some ten miles of the finest type of mountain roads and paths to be found anywhere, and has improved and beautified these mountains until they are more like private lawns than a public park. To afford some idea of how widespread these waters are becoming—and all Arkansas should be proud of this resort—I will say that during January, February and March there were over 65,000 visitors here for rest, recreation and the baths. There was paid out for baths alone, not including the attendants' fees, during those months, over \$90,000.00. The price ranges from \$9.00 to \$13.00 for twenty-one baths, including attendant's fee, and this is regulated by the government. The bath houses pay an annual tubbage rental of \$60.00 per tub, and the attendants receive fifteen cents for each bath. During the last year there were erected in the reservation two new bath houses, costing approximately \$150,000.00 each, and it is said by those most competent of knowing that there are no more magnificent bathing palaces in all the world. It is contemplated, and I feel sure there will be three additional new houses erected during this year, so that within five years Hot Springs will have on the government reservation a bath house row unequalled in all the world.

We have visitors here from nearly every place on the globe. As an example, one day recently a bath house daily report showed the names of citizens of seven different foreign countries. Each bath house makes a daily report to this office, showing every person bathed, residence, local residence and attending physician.

If the State of Arkansas appreciated the wonderful future and possibilities of this place as a world-wide resort—one that is destined to be known as the world's sanitarium and pleasure resort—it would by legislation exempt the city from State taxation and request Congress to bear an equal share in the operating expense and improvements of the city, and let the city be governed by, say, three or five commissioners, similar to the way the District of Columbia is governed. If this were done, vast and substantial improvements would follow. Every State in the Union and every country in the world send their citizens here.

Provision must be afforded for a population of 50,000 to 65,000, and this is a burden on these people. Of course it may be argued that they live on providing for the visitor. True; but the visitor receives as much or more for his money here than he receives elsewhere. The government should be called on to aid in governing and improving the city, for the reason its citizens come here from every State, and expect and demand every comfort and protection. Hot Springs is the most valuable asset owned by this or any other government, and as such it should have every assistance possible and within the bounds of reason. It should not be considered merely a local proposition, nor a State proposition, nor merely a national one, but all these and an international one besides. Let mankind generally know the wonderful curative powers of these waters, and let him come, bathe and be cured.

The following is taken from a government circular, and speaks for itself:

"The waters are radio-active in a marked degree, and to the presence of this rare element in gaseous form is now generally attributed their salutary effects. The baths create a reaction accompanied by an elevation of body temperature, accelerated heart action with diminished blood pressure in the arteries, and a stimulation of the nutritive changes in the tissue cells, especially those

composing the organs of elimination and those concerned in the formation of the blood. The mineral constituent is very low, and when the waters are taken internally, combined with the sweating produced by the baths and packs, elimination by all the emunctories is greatly increased.

"The hot waters may reasonably be expected to give relief in the following conditions: In gout or rheumatism after the acute or inflammatory stage; in neuralgia when dependent upon gout, rheumatism, malaria or metallic poisoning; in the early stages of chronic Bright's disease; in catarrhal conditions of the gall bladder; in certain forms of disease of the pelvic organs, and in sterility in women; in chronic malaria, alcoholism and drug addictions; in many chronic skin diseases; in some forms of anemia; in syphilis; in gonorrheal rheumatism; in toxæmias and conditions of defective elimination, and in some forms of cardiovascular disease with increased tension in the blood vessels.

"The general tonic and recuperative effects are marked in conditions of debility and neurasthenia due to the strain and fatigue incident to social and business cares and responsibilities, and in many other conditions the baths and climate are useful adjuncts to medical treatment."

When we consider that these waters are within twenty-four hours' ride of over fifty-two million of American citizens, and that these waters almost universally bring relief, if not permanent cure, is it not wonderful that this is not a city of twenty times its present size? Well, it will be within a few years. The manifold blessings of health due mankind from these baths will very soon be known and appreciated by all men, and when this fact is universally known there will have been nothing in history, fact or fiction in all the world to equal the gladsome praises which will then be sung by the visitor to this beautiful health-giving resort.

PRELIMINARY PROGRAM

of the
Thirty-Sixth Annual Session
of the
ARKANSAS MEDICAL SOCIETY

Hot Springs, Ark.
May 13, 14, 15, 16, 1912.

OFFICERS.

President—Morgan Smith, Little Rock.
First Vice President—J. B. Roe, Calico Rock.
Second Vice President—J. C. Amis, Fort Smith.

Third Vice President—J. W. Webster, Siloam Springs.
Treasurer—J. S. Wood, Hot Springs.
Secretary—C. P. Meriwether, Little Rock.

COUNCILORS.

Chairman—R. A. Hilton, El Dorado.
First District—M. C. Hughey, Rector. (Term expires 1913.)
Second District—J. H. Kennerly, Batesville. (Term expires 1912.)
Third District—T. B. Bradford, Cotton Plant. (Term expires 1913.)
Fourth District—A. D. Knott, Wilmot. (Term expires 1912.)
Fifth District—R. A. Hilton, El Dorado. (Term expires 1913.)
Sixth District—L. J. Kosminsky, Texarkana. (Term expires 1912.)
Seventh District—R. Y. Phillips, Malvern. (Term expires 1913.)
Eighth District—A. H. McKenzie, Dardanelle. (Term expires 1912.)
Ninth District—F. B. Kirby, Harrison. (Term expires 1913.)
Tenth District—M. S. Dibrell, Van Buren. (Term expires 1912.)

DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION.

J. T. Clegg, Siloam Springs. (Term expires.)
G. A. Warren, Black Rock. (Term expires 1913.)

ALTERNATES.

L. H. Barry, Hot Springs. (Term expires.)
W. N. Yates, Fayetteville. (Term expires 1913.)

OFFICERS OF SECTIONS.

Medicine—H. P. Collings, Hot Springs, chairman; W. H. Toland, Mineral Springs, secretary.
Surgery—C. F. Perkins, Springdale, chairman; S. E. Thompson, El Dorado, secretary.
Obstetrics and Gynecology—W. A. Snodgrass, Little Rock, chairman; R. L. Saxon, secretary.
Pathology—W. F. Mount, Hot Springs, chairman; Nina V. Hardin, Fayetteville, secretary.
State Medicine and Public Hygiene—W. H. Deadrick, Marianna, chairman; L. T. Evans, Barren Fork, secretary.
Dermatology and Syphilology—Wm. R. Bathurst, Little Rock, chairman; J. H. Weaver, Hope, secretary.
Diseases of Children—Wm. Crutcher, Pine Bluff, chairman; E. E. Barlow, Dermott, secretary.

STANDING COMMITTEES.

Committee on State Legislation and Public Policy—
L. H. Barry, Hot Springs, chairman.
R. C. Dorr, Batesville.
J. W. Weaver, Hope.
Morgan Smith, Little Rock (ex-officio).
C. P. Meriwether, Little Rock (ex-officio).
Scientific Program Committee—
J. V. Laws, Hot Springs, chairman.
E. H. Martin, Hot Springs.
C. P. Meriwether, Little Rock.
Committee on Arrangements—
S. L. Steer, Hot Springs, chairman.
John M. Proctor, Hot Springs.
John S. Wood, Hot Springs.

SPECIAL COMMITTEES.

Tuberculosis Committee—
F. B. Young, Springdale, chairman.
Henry Thibault, Scott's.
A. J. Vance, Harrison, secretary.

Visiting Committee, Medical Department, Arkansas University—

L. P. Gibson, Little Rock, chairman.

W. B. Lawrence, Batesville.

J. W. Scales, Pine Bluff.

Committee on Organization—

R. H. T. Mann, Texarkana, chairman.

J. C. Hughes, Walnut Ridge.

Thos. Douglas, Ozark.

L. T. Evans, Barren Fork.

M. M. Norton, Lake Village.

Morgan Smith, Little Rock (ex-officio).

C. P. Meriwether, Little Rock (ex-officio).

ANNOUNCEMENTS.

Reduced Rates to Hot Springs.

All railroads in Arkansas will make a rate of one and one-third fare to Hot Springs, on account of the meeting of the Arkansas Medical Society and the Pharmaceutical Association of Arkansas. Tickets on sale May 11 to 15, and bear final return May 19.

Members on arrival at Hot Springs should repair at once to the registration office at the Arlington Hotel, where they may register and receive badges and programs.

All meetings will be held in the Eastman Hotel.

Hotels.

Arlington—\$3.00 per day and up.

Majestic—\$2.50 per day, with bath \$3.50.

Waukesha—\$2.00 and \$2.50 per day.

Pullman—\$2.00 and \$2.50 per day.

Milwaukee—\$2.00 per day.

Moody—\$2.50 per day.

Great Northern—\$1.00 per day (European).

Marquette—\$1.00 per day and up (European).

The Arlington Hotel will be the headquarters.

Entertainment for Ladies.

Tuesday Night—Ball at the Arlington Hotel.

Wednesday—Card party in the ball room of the Arlington Hotel, 3 p. m.

Thursday—Tallyho ride over the mountains, starting at Arlington Hotel at 3 p. m.

Entertainments for Members.

Tuesday Night—Ball at the Arlington Hotel.

Thursday Night—Smoker by the Business Men's League of Hot Springs, to the members of the Arkansas Medical Society and Pharmaceutical Association, in the lobby of the Eastman Hotel.

Special Entertainments.

Wednesday Night, 10 O'clock—

Tulane Alumni banquet.

Jefferson Alumni banquet.

Medical Department Arkansas University Alumni banquet.

Public Meeting.

A public meeting will be held on Tuesday night at 8 p. m. under the auspices of the Section on Hygiene and Public Health.

NOTICE.

All papers read at this meeting are the property of the Arkansas Medical Society, and should be handed to the Secretary of the Section as soon as read. No paper should require more than 20 minutes in reading. All discussions are limited to five minutes.

PROGRAM.

First Day—Monday, May 13.

First meeting of the House of Delegates, Grill Room, Eastman Hotel.

Morning Session, 9 O'clock.

Calling the meeting to order.

Invocation—Rabbi Rhine.

Address of Welcome—Dr. A. U. Williams, president of Hot Spring-Garland County Medical Society.

Appointment of Committee on Credentials.

Recess of ten minutes.

Report of Committee on Credentials.

Roll call of delegates.

Appointment of Reference Committees.

President's address to the House of Delegates.

Report of Committee on State Legislation and Public Policy—L. H. Barry, Hot Springs, chairman.

Report of Committee on Scientific Program—

J. V. Laws, Hot Springs, chairman.

Report of Committee on Tuberculosis—F. B. Young, Springdale, chairman.

Report of Visitors to the Medical Department of the University of Arkansas—L. P. Gibson, chairman, Little Rock.

Report of Committee on Organization—R. H. T. Mann, chairman, Texarkana.

Report of Delegates to the 1911 Meeting of the American Medical Association.

Report of Committee on Arrangements—S. L. Steer, Hot Springs, chairman.

Report of Chairman of the Council—J. A. Hilton, El Dorado.

Report of the secretary.

Report of the treasurer.

Reading of communications.

Reading of memorials and resolutions.

Selecting the Nominating Committee.

Selecting members State Board of Medical Examiners.

Miscellaneous business.

Adjournment.

TUESDAY, MAY 14.

General Session, 9 A. M.

Dining room Eastman Hotel.

Calling the meeting to order.

Invocation by Rev. Fornie Hutcheson.

Address of Welcome—Mayor W. W. Waters.

Address of Welcome—H. H. Myers, superintendent United States Reservation.

Response to the addresses of welcome on behalf of the Arkansas Medical Society—J. P. Runyan, Little Rock.

Response to the addresses of welcome on behalf of the Pharmaceutical Association—J. B. Bond, Sr., Little Rock.

*President's Annual Address—Morgan Smith, Little Rock.

Adjournment.

*The members of the Pharmaceutical Association will repair to their meeting place immediately after Dr. Bond's response to the address of welcome.

SCIENTIFIC SESSION.

Immediately after adjournment of general session.

SECTION ON PATHOLOGY AND BACTERIOLOGY.

Chairman—M. F. Mount, Hot Springs.

Secretary—Nina V. Hardin, Fayetteville.

1. Chairman's address.

2. "Thoracic Aneurism: Report of Two Cases"—Jas. H. Chesnutt, Hot Springs.

3. "Bacterins and Bacterin Therapy"—A. L. Carmichael, Little Rock.

4. To be announced.

**SECTION ON DERMATOLOGY AND SYPHIL-
OLOGY.**

Chairman—Wm. R. Bathurst, Little Rock.

Secretary—J. H. Weaver, Hope.

1. Chairman's address.
2. "The Diagnosis and Treatment of Pruritis"—Isadore Dyer, New Orleans, La.
3. "The Laboratory as a Diagnostic Aid in Skin Diseases"—Nettie Klein, Texarkana.
4. "Pathology of the Different Lesions of Syphilis"—Leonard R. Ellis, Hot Springs.
5. "The Relative Merit of Mercury and 606 for the Cure of Syphilis, and the Clinical Value of the Wassermann Reaction"—Eugene Carson Hay, Hot Springs.
6. Skin clinic.

SECTION ON DISEASES OF CHILDREN.

Chairman—William Crutcher, Pine Bluff.

Secretary—E. E. Barlow, Dermott.

1. Chairman's Address—"The Duty of Physicians to Teach Mothers."
 2. "What the General Practitioner too Often Overlooks"—Wm. Breathwit, Pine Bluff. Discussion opened by D. R. Hardeman, Little Rock.
 3. "The Surgical Side of Pediatrics"—E. E. Barlow, Dermott.
 4. "The Necessity of a Careful Examination of Children"—T. E. Rhine, Thornton. Discussion opened by Morgan Smith, Little Rock, Ark.
- Adjournment for lunch at the discretion of the chairman.

PUBLIC MEETING.

Tuesday Night—8 O'clock.

**SECTION ON STATE MEDICINE AND PUBLIC
HYGIENE.**

Dining Room, Eastman Hotel.

Chairman—W. H. Deadrick, Marianna.

Secretary—L. T. Evans, Barren Fork.

1. "The Pure Food and Drug Act, and Why It Is Not Enforced in Arkansas"—Frank Schachleier, Ph. D., ex-president Pharmaceutical Association of Arkansas, Hot Springs.
2. "Public Health"—W. A. Evans, Chicago, Ill.

WEDNESDAY, MAY 15.

General Session, 8:45 A. M.

SECTION ON SURGERY.

Chairman—C. F. Perkins, Springdale.

Secretary—S. E. Thompson, El Dorado.

1. Chairman's address.
2. "Sarcoma of the Naso-Pharynx"—R. C. Dorr, Batesville. Discussion opened by Robert Caldwell, Little Rock.
3. Subject to be announced—E. S. Judd, Rochester, Minn.
4. "The Operative Treatment of Acute Otitis Media"—W. T. McCurry, Little Rock.
5. "Gall-stones"—A. J. Foltz, Fort Smith.
6. "Recent Investigation in Vascular Surgery"—Carroll W. Allen, New Orleans, La. Discussion opened by J. P. Runyan, Little Rock.
7. "Gasoline Burns—Treatment and Results"—C. M. Lutterloh, Jonesboro.
8. "Early Diagnosis in Appendicitis"—C. R. Shinault, Little Rock.

9. "The Operative Treatment of Recent Fracture of the Long Bone"—M. G. Thompson, Hot Springs.

WEDNESDAY, MAY 15.

Afternoon Session, 1:30 O'clock.

SECTION ON PRACTICE OF MEDICINE.

Chairman—Howard P. Collings, Hot Springs.

Secretary—W. H. Toland, Mineral Springs.

1. Chairman's address.
2. "Personal Experience in the Treatment of Pellagra"—C. J. March, Fordyce, Ark. Discussion opened by E. H. Martin, Hot Springs.
3. "Diagnosis of Some Kidney Affections"—J. K. Smith, Texarkana.
4. "Indispensable Adjuncts in Diagnosis"—E. D. Holland, Hot Springs.
5. "The Radical Treatment of Iritis"—Wm. Breathwit, Pine Bluff, Ark. Discussion opened by Z. N. Short, Hot Springs.
6. "Laryngeal Diphtheria"—R. H. T. Mann, Texarkana. Discussion opened by F. Vinsonhaler, Little Rock.
7. "The Country Doctor, His Methods and His Tools"—Henry Thibault, Scott, Ark.
8. "The Treachery of Typhoid Fever"—C. S. Pettus, El Dorado. Discussion opened by J. W. Meek, Camden.
9. "Cardiac Arrhythmias"—C. C. Conover, Kansas City, Mo.
10. "Diet and Exercise in the Treatment of Obesity"—Major R. Boyd Miller, Army and Navy Hospital, Hot Springs. Discussion opened by John B. Elliott, Jr., New Orleans, La.
11. "Climate in Tuberculosis"—J. S. Shibley, Arkansas Tuberculosis Sanatorium, Booneville.
12. "The X-Ray as a Diagnostic Agent in Medicine"—A. M. Zell, Little Rock. Discussion opened by L. P. Gibson, Little Rock.

PUBLIC MEETING.

Evening Session, 8 O'clock.

Dining Room, Eastman Hotel.

**SECTION ON PRACTICE OF MEDICINE—(Con-
tinued).**

13. "Hookworm Disease in the South" (illustrated with lantern views)—W. S. Leathers, University of Mississippi. General discussion.

THURSDAY, MAY 16.

Morning Session, 9 A. M.

Secretary—R. L. Saxon, Little Rock.

1. Chairman's address.
2. "Uterine Hemorrhages, Etiology and Treatment"—W. R. Brooksher, Fort Smith.
3. "Significance of Ammonia-Nitrogen in Urine of Pregnant Woman"—J. C. Cunningham, Little Rock.
4. "The Obstetrician and the Perineum—His Care of During, and After Labor"—Allen E. Cox, Helena.
5. Subject to be announced—E. S. Lewis, New Orleans, La.
6. "Report of a Cesarean Section and a Porro-Cesarean Section"—Wm. V. Laws, Hot Springs.
7. "A Rambling Paper on Obstetrics"—E. H. Winkler, DeWitt.
8. Subject to be announced—T. J. Stout, Brinkley.

9. "Involution of the Uterus"—E. N. Davis, Little Rock.
10. "The Value of Time Saved During an Operation"—Preston Hunt, Texarkana.

GENERAL SESSION.

Immediately after Section on Gynecology and Obstetrics adjourns.

Calling meeting to order by the president.
 Unfinished business.
 Report of Nominating Committee.
 Report of other committees.
 Election of officers.
 New business.
 Selection of place of next meeting.
 Adjournment *sine die*.

THURSDAY, MAY 16.

2:30 P. M.

Joint session of the Arkansas Medical Society and the Pharmaceutical Association of Arkansas, presided over by the presidents of both associations.

1. "The Physician, Pharmacist and Proprietary Medicines"—Allen E. Cox, M. D., Helena.
 2. "Our Professions and the Sick Man"—W. A. Snodgrass, M. D., Little Rock.
 3. "Co-operation Between Physician and Pharmacist Through the Prescribing of Pharmacopoeial and National Formulary Preparations"—E. G. Eberly, Ph. D., ex-president American Pharmaceutical Association, Dallas, Tex.
 4. Subject to be announced—John B. Bond, Sr., Little Rock.
- General discussion.

Delegates to the Thirty-Sixth Annual Session of the Arkansas Medical Society, Hot Springs, May 13, 14, 15, 16, 1912.

Counties	Delegates	Address	Alternates	Address
Arkansas.....	W. H. Morehead.....	Stuttgart.....	A. M. Lowe.....	Gilette
Ashley.....	A. E. Cone.....	Portland.....	J. E. Sparks.....	Crossett
Baxter.....	J. T. Tipton.....	Mountain Home.....	J. A. Hipp.....	Buford
Benton.....	E. E. Pickens.....	Rogers.....	C. H. Cargile.....	Bentonville
Boone.....	C. M. Routh.....	Berryville.....	A. M. Hathcock.....	Harrison
Chicot.....	E. E. Barlow.....	Dermott.....	M. M. Norton.....	Lake Village
Conway.....	A. R. Bradley.....	Morrilton.....	W. L. Presley.....	Morrilton
Grant.....	J. R. Butler.....	Sheridan.....	Pittman.....	Grapevine
Greene.....	Thad Cathren.....	Walcott.....	R. E. Bradshaw.....	Paragould
Hempstead.....	S. J. Weaver.....	Fulton.....	W. F. Saner.....	Hope
Hot Spring.....	E. H. McCray.....	Malvern.....	W. A. Carroll.....	Saginaw
Jackson.....	L. E. Willis.....	Newport.....	C. R. Gray.....	Newport
Jefferson.....	B. D. Luck.....	Pine Bluff.....	C. K. Caruthers.....	Pine Bluff
Johnson.....	G. D. Huddleston.....	Lamar.....	G. L. Hardgraves.....	Clarksville
Lawrence.....	W. W. Hatcher.....	Imboden.....	J. W. Morris.....	Denton
Little River.....	W. E. Vaughan.....	Richmond.....	P. H. Phillips.....	Ashdown
Lincoln.....	C. W. Dixon.....	Douglas.....		
Miller.....	R. H. T. Mann.....	Texarkana.....		
Mississippi.....	E. E. Craig.....	Wilson.....	J. F. Sanders.....	Bethville
Nevada.....	S. J. Hesterly.....	Prescott.....	W. W. Rice.....	Prescott
Ouachita.....	J. S. Rinehart.....	Camden.....	A. Davison.....	Camden
Saline.....	Duell Gann.....	Benton.....	Warren Kelley.....	Benton
White.....	A. G. Harrison.....	Kensett.....	S. T. Tapeccott.....	Searcy
Woodruff.....	R. Q. Patterson.....	Augusta.....	J. M. Osborne.....	Howell

CONSTITUTION and BY-LAWS OF THE

ARKANSAS MEDICAL SOCIETY.

ARTICLE I.—NAME OF THE SOCIETY.

The name and title of this organization shall be the Arkansas Medical Society.

ARTICLE II.—PURPOSES OF THE SOCIETY.

The purposes of this Society shall be to federate and bring into one compact organization the entire medical profession of the State of Arkansas and to unite with similar societies of other States to form the American Medical Association; to extend medical knowledge and advance medical science; to elevate the standard of medical education, and to secure the enactment and enforcement of just medical laws; to promote friendly intercourse among physicians; to guard and foster the material interests of its members and to protect them against imposition; and to enlighten and direct public opinion in regard to the great problems of State medicine, so that the profession shall become more capable and honorable within itself, and more useful to the public, in the prevention and cure of disease, and in prolonging and adding comfort to life.

ARTICLE III.—COMPONENT SOCIETIES.

Component Societies shall consist of those county medical societies which hold charters from this Society.

ARTICLE IV.—COMPOSITION OF THE SOCIETY.

SECTION 1. This Society shall consist of Members, Delegates and Guests.

SEC. 2. MEMBERS. The members of this Society shall be the members of the component county medical societies.

SEC. 3. DELEGATES. Delegates shall be those members who are elected in accordance with this Constitution and By-Laws to represent their respective component societies in the House of Delegates of this Society.

SEC. 4. GUESTS. Any distinguished physician not a resident of this State, who is a member of his own State Society, may become a guest during any Annual Session on invitation of the officers of this Society, and shall be accorded the privilege of participating in all of the scientific work for that Session.

ARTICLE V.—HOUSE OF DELEGATES.

The House of Delegates shall be the legislative body of the Society, and shall consist of: (1) Delegates elected by the component county societies; (2) the Councilors; and (3) *ex-officio*, the President and Secretary of this Society.

ARTICLE VI.—COUNCIL.

The Council shall consist of the Councilors, and the President and Secretary, *ex-officio*. Besides its duties mentioned in the By-Laws, it shall constitute the Finance Committee of the House of Delegates. Six Councilors shall constitute a quorum.

ARTICLE VII.—SECTIONS AND DISTRICT SOCIETIES.

The House of Delegates may provide for a Division of the scientific work of the Society into appropriate sections, and for the organization of such Councilor District Societies as will promote the best interests of the profession, such societies to be composed exclusively of members of component county societies.

ARTICLE VIII.—SESSIONS AND MEETINGS.

SECTION 1. The Society shall hold an Annual Session, during which there shall be held daily general meetings, which shall be open to all registered members and guests.

SEC. 2. The time and place for holding each annual session shall be fixed by the House of Delegates.

ARTICLE IX.—OFFICERS.

SECTION 1. The officers of this Society shall be a President, three Vice Presidents, a Secretary, a Treasurer and ten Councilors.

SEC. 2. The officers, except the Councilors, shall be elected annually. The terms of the Councilors shall be for two years, those first elected serving one and two years, as may be arranged, so that after the first year five Councilors shall be elected annually to serve two years. All these officers shall serve until their successors are elected and installed.

ARTICLE X.—RECIPROCITY OF MEMBERSHIP WITH OTHER STATE SOCIETIES.

In order to broaden professional fellowship this Society is ready to arrange with other State Medical Societies for an interchange of certificates of membership, so that members moving from one State to another may avoid the formality of re-election.

ARTICLE XI.—FUNDS AND EXPENSES.

Funds shall be raised by an equal per capita assessment on each component society. The amount of the assessment shall be fixed by the House of Delegates, but shall not exceed the sum of \$2.50 per capita per annum, except on a four-fifths vote of the Delegates present. Funds may also be raised by voluntary contributions, from the Society's publications and in any other manner approved by the House of Delegates. Funds may be appropriated by the House of Delegates to defray the expenses of the Society for publications, and for such other purposes as will promote the welfare of the profession. All resolutions appropriating funds must be referred to the Finance Committee before action is taken thereon.

ARTICLE XII.—REFERENDUM.

SECTION 1. A General Meeting of the Society may, by a two-thirds vote of the members present, order a general referendum on any question pending before the House of Delegates, and when so ordered the House of Delegates shall submit such question to the members of the Society, who may vote by mail or in person, and, if the members voting shall comprise a majority of all the members of the Society, a majority of such vote shall determine the question and be binding on the House of Delegates.

SEC. 2. The House of Delegates may, by a two-thirds vote of its own members, submit any question before it to a general referendum, as provided in the preceding section, and the result shall be binding on the House of Delegates.

ARTICLE XIII.—THE SEAL.

The Society shall have a common seal, with power to break, change or renew the same at pleasure.

ARTICLE XIV.—AMENDMENTS.

The House of Delegates may amend any article of this Constitution by a two-thirds vote of the Delegates present at any Annual Session, provided that such amendment shall have been presented in open meeting at the previous Annual Session, and that it shall have been published twice during the year in the bulletin or journal of this Society, or sent officially to each component society at least two months before the meeting at which final action is to be taken.

BY-LAWS.

CHAPTER I.—MEMBERSHIP.

SECTION 1. The name of a physician on the properly certified roster of members of a component society, which has paid its annual assessment, shall be *prima facie* evidence of membership in this society.

SEC. 2. Any person who is under sentence of suspension or expulsion from a component society, or whose name has been dropped from its roll of members, shall not be entitled to any of the rights or benefits of this Society, nor shall he be permitted to take part in any of its proceedings until he has been relieved of such disability.

SEC. 3. Each member in attendance at the Annual Session shall enter his name on the registration book, indicating the component society of which he is a member. When his right to membership has been verified by reference to the roster of his society, he shall receive a badge which shall be evidence of his right to all the privileges of membership at that session. No member shall take part in any of the proceedings of an Annual Session until he has complied with the provisions of this section.

CHAPTER II.—ANNUAL AND SPECIAL SESSIONS OF THE SOCIETY.

SECTION 1. The Society shall hold an Annual Session at such time and place as has been fixed at the preceding Annual Session by the House of Delegates.

SEC. 2. Special meetings of either the Society or of the House of Delegates shall be called by the President on petition of twenty delegates or fifty members.

CHAPTER III.—GENERAL MEETINGS.

SECTION 1. All registered members may attend and participate in the proceedings and discussions of the General Meetings and of the Sections. The General Meetings shall be presided over by the President or by one of the Vice Presidents, and before them shall be heard the address of the President and the orations, and such scientific papers and discussions as may be arranged for in the program.

SEC. 2. The General Meetings may recommend to the House of Delegates the appointment of committees or commissions for scientific investigation of special interest and importance to the profession and public.

CHAPTER IV.—HOUSE OF DELEGATES.

SECTION 1. The House of Delegates shall meet on the day before that fixed as the first day of the Annual Session. It may adjourn from time to time as may be necessary to complete its business, provided, that its hours shall conflict as little as possible with the General Meetings. The order of business shall be arranged as a separate section of the program.

SEC. 2. Each component county society shall be entitled to send to the House of Delegates each year one delegate for every 25 members, and one for each major fraction thereof, but each component society which has made its annual report and paid its assessment as provided for in this Constitution and By-laws shall be entitled to one delegate.

SEC. 3. A majority of the Delegates registered shall constitute a quorum.

SEC. 4. It shall, through its officers, Council and otherwise, give diligent attention to and foster the scientific work and spirit of the Society, and shall constantly study and strive to make each Annual Session a stepping-stone to future ones of higher interest.

SEC. 5. It shall consider and advise as to the material interests of the profession, and of the public in those important matters wherein it is dependent on the profession, and shall use its influence to secure and enforce all proper medical and public health legislation, and to diffuse popular information in relation thereto.

SEC. 6. It shall make careful inquiry into the condition of the profession of each county in the State, and shall have authority to adopt such methods as may be deemed most efficient for building up and increasing the interest in such county societies as already exist, and for organizing the profession in counties where societies do not exist. It shall especially and systematically endeavor to promote friendly intercourse among physicians of the same locality, and shall continue these efforts until every physician in every county of the State who is reputable and eligible has been brought under medical society influence.

SEC. 7. It shall encourage post-graduate and research work, as well as home study, and shall endeavor to have the results utilized and intelligently discussed in the county societies.

SEC. 8. It shall elect representatives to the House of Delegates of the American Medical Association in accordance with the Constitution and By-laws of that body.

SEC. 9. It shall divide the State into Councilor Districts, specifying what counties each district shall include, and, when the best interest of the Society and profession will be promoted thereby, organize in each a district medical society, and all members of component county societies shall be members in such district societies.

SEC. 10. It shall have authority to appoint committees for special purposes from among members of the Society who are not members of the House of Delegates. Such committees shall report to the House of Delegates, and may be present and participate in the debate on their reports.

SEC. 11. It shall approve all memorials and resolutions issued in the name of the Society before they shall become effective.

CHAPTER V.—ELECTION OF OFFICERS.

SECTION 1. The House of Delegates on the first day of the Annual Session shall select a Committee on Nominations, consisting of ten delegates, no two of whom shall be from the same Councilor District. It shall be the duty of this committee to consult with the members of the Society and to hold one or more meetings at which the best interests of the Society and of the profession of the State for the ensuing year shall be carefully considered. The committee shall report the result of its deliberations to the House of Delegates in the shape of a ticket containing the names of three members for the office of President and of one member for each of the other offices to be filled at that Annual Session. No two candidates for President shall be named from the same county.

SEC. 2. All elections shall be by ballot, except where there is only one candidate, when election may be made by acclamation, and a majority of the votes cast shall be necessary to elect.

SEC. 3. The report of the Nominating Committee shall be the first order of business of the House of Delegates after the reading of the minutes on the morning of the last day of the General Session.

SEC. 4. The election of officers shall be the second order of business of the House of

Delegates on the morning of the last day of the General Session.

SEC. 5. Any person known to have solicited votes for or sought any office within the gift of this Society shall be ineligible for any office for two years.

CHAPTER VI.—DUTIES OF OFFICERS.

SECTION 1. The President shall preside at all meetings of the Society and of the House of Delegates: shall appoint all committees not otherwise provided for; he shall deliver an annual address at such time as may be arranged, and shall perform such other duties as custom and parliamentary usage may require. He shall be the real head of the profession of the State during his term of office, and, as far as practicable, shall visit, by appointment, the various sections of the State and assist the Councilors in building up the county societies, and in making their work more practical and useful.

SEC. 2. The Vice Presidents shall assist the President in the discharge of his duties. In the event of the President's death, resignation or removal, the Council shall select one of the Vice Presidents to succeed him.

SEC. 3. The Treasurer shall give bond in the sum of \$1,000. He shall demand and receive all funds due the Society, together with bequests and donations. He shall pay money out of the Treasury only on a written order of the President, countersigned by the Secretary; he shall subject his accounts to such examination as the House of Delegates may order, and he shall annually render an account of his doings and of the state of the funds in his hands.

SEC. 4. The Secretary shall give bond in the sum of \$1,000; he shall attend the General Meeting of the Society and the meetings of the House of Delegates, and shall keep minutes of their respective proceedings in separate record books. He shall be *ex-officio* Secretary of the Council. He shall be custodian of all record books and papers belonging to the Society, except such as properly belong to the Treasurer, and shall keep account of and promptly turn over to the Treasurer all funds of the Society which come into his hands. He shall provide for the registration of the members and delegates at the Annual Session. He shall, with the co-operation of the secretaries of the component societies, keep a card-index register of

all the legal practitioners of the State by counties, noting on each his status in relation to his county society, and, on request, shall transmit a copy of this list to the American Medical Association. He shall aid the Councilors in the organization and improvement of the county societies and in the extension of the power and usefulness of this Society. He shall conduct the official correspondence, notifying members of meetings, officers of their election and committees of their appointment and duties. He shall employ such assistants as may be ordered by the House of Delegates, and shall make an annual report to the House of Delegates. He shall supply all component societies with the necessary blanks for making their annual reports; shall keep an account with the component societies, charging against each society its assessment, collect the same and turn it over to the Treasurer, taking his receipt therefor. Acting with the Committee on Scientific Work, he shall prepare and issue all programs. The amount of his salary shall be fixed by the House of Delegates.

SEC. 5. The Council shall have authority to accept or reject all bonds.

CHAPTER VII.—COUNCIL.

SECTION 1. The Council shall meet on the day preceding the Annual Session and daily during the Session and at such other times as necessity may require, subject to the call of the chairman or on a petition of three Councilors. It shall meet on the last day of the Annual Session of the Society to organize and outline the work for the ensuing year. It shall elect a Chairman and a Clerk, who, in the absence of the Secretary of the Society, shall keep a record of its proceedings. It shall, through its Chairman, make an annual written report to the House of Delegates.

SEC. 2. Each Councilor shall be organizer, peacemaker and censor for his district. He shall visit the counties in his district at least once a year for the purpose of organizing component societies where none exist, for inquiring into the condition of the profession, and for improving and increasing the zeal of the county societies and their members. He shall make an annual written report of his work, and of the condition of the profession of each county in his district at the annual session of the House of Delegates. The necessary traveling expenses incurred by such Councilor in the line of the duties herein im-

posed may be allowed on a proper itemized statement, but this shall not be construed to include his expenses in attending the Annual Session of the Society.

SEC. 3. The Council shall be the Board of Censors of the Society. It shall consider all questions involving the right and standing of members, whether in relation to other members, to the component societies, or to this Society. All questions of an ethical nature brought before the House of Delegates or the General Meeting shall be referred to the Council without discussion. It shall hear and decide all questions of discipline affecting the conduct of members or component societies, on which an appeal is taken from the decision of an individual Councilor, and its decision in all such matters shall be final.

SEC. 4. In sparsely settled sections it shall have authority to organize the physicians of two or more counties into societies, to be suitably designated so as to distinguish them from district societies, and these societies, when organized and chartered, shall be entitled to all rights and privileges provided for component societies until such counties shall be organized separately.

SEC. 5. The Council shall provide for and superintend the publication and distribution of all proceedings, transactions and memoirs of the Society, and shall have authority to appoint an editor and such assistants as it deems necessary. All money received by the Council and its agents, resulting from the discharge of the duties assigned to them, must be paid to the Treasurer of the Society. It shall annually audit the accounts of the Treasurer and Secretary and other agents of this Society and present a statement of the same in its annual report to the House of Delegates, which report shall also specify the character and cost of all the publications of the Society during the year, and the amount of all other property belonging to the Society under its control, with such suggestions as it may deem necessary. In the event of a vacancy in the office of the Secretary or of the Treasurer, the Council shall fill the vacancy until the next annual election.

SEC. 6. In case of a vacancy in the office of Delegate, the Council shall have authority to seat any member of that county society in attendance at said meeting as Delegate, with full right to perform all the duties of that office.

CHAPTER VIII.—COMMITTEES.

SECTION 1. The standing committees shall be as follows:

A Committee on Scientific Work.

A Committee on Public Policy and Legislation.

A Committee on Arrangement.

Such committees shall be appointed by the President unless otherwise provided.

SEC. 2. The Committee on Scientific Work shall consist of three members, of which the Secretary shall be one, and shall determine the character and scope of the scientific proceedings of the Society for each session, subject to the instructions of the House of Delegates. Thirty days previous to each Annual Session it shall prepare and issue a program announcing the order in which papers and discussions shall be presented.

SEC. 3. The Committee on Public Policy and Legislation shall consist of three members and the President and Secretary. Under the direction of the House of Delegates it shall represent the Association in securing and enforcing legislation in the interest of public health and of scientific medicine. It shall keep in touch with professional and public opinion, shall endeavor to shape legislation so as to secure the best results for the whole people, and shall strive to organize professional influence so as to promote the general good of the community in local, State and national affairs and elections.

SEC. 4. The Committee of Arrangements shall be appointed by the component society of the county in which the Annual Session is to be held. It shall provide suitable accommodations for the meeting places of the Society and of the House of Delegates, and of their respective committees, and shall have general charge of all the arrangements. Its chairman shall report an outline of the arrangements to the Secretary for publication in the program, and shall make additional announcements during the session as occasion may require.

CHAPTER IX.—COUNTY SOCIETIES.

SECTION 1. All county societies now in affiliation with this Society or those which may hereafter be organized in this State, which have adopted principles of organization not in conflict with this Constitution and By-laws, shall, on application, receive a charter from and become a component part of this Society.

SEC. 2. As rapidly as can be done after the adoption of this Constitution and By-laws, a medical society shall be organized in every county in the State in which no component society exists, and charters shall be issued thereto.

SEC. 3. Charters shall be issued only on approval of the Council, and shall be signed by the President and Secretary of this Society. Upon the recommendation of the Council the House of Delegates may revoke the charter of any component society whose actions are in conflict with the letter or spirit of this Constitution and By-laws.

SEC. 4. Only one component medical society shall be chartered in any county. Where more than one county society exists, friendly overtures and concessions shall be made, with the aid of the Council for the District if necessary, and all of the members brought into one organization. In case of failure to unite, an appeal may be made to the Council, which shall decide what action shall be taken.

SEC. 5. Each county society shall judge of the qualification of its own members, but, as such societies are the only portals to this Society and to the American Medical Association, every reputable and legally registered physician who is a graduate of a reputable medical college and who does not practice or claim to practice, nor lend his support to any exclusive system of medicine, shall be eligible to membership. Before a charter is issued to any county society, full and ample notice and opportunity shall be given to every such physician in the county to become a member.

SEC. 6. Any physician who may feel aggrieved by the action of the society of his county in refusing him membership, or in suspending or expelling him, shall have the right to appeal to the Council, and its decision shall be final.

SEC. 7. In hearing appeals the Council may admit oral or written evidence as in its judgment will best and most fairly present the facts, but in case of every appeal, both as a Board and as individual Councilors in district and county work, efforts at conciliation and compromise shall precede all such hearings.

SEC. 8. When a member in good standing in a component society moves to another county in this State, his name, on request,

shall be transferred without cost to the roster of the county society into whose jurisdiction he moves.

SEC. 9. A physician living near a county line may hold his membership in that county most convenient for him to attend, on permission of the component society in whose jurisdiction he resides.

SEC. 10. Each component society shall have general direction of the affairs of the profession in its county, and its influence shall be constantly exerted for bettering the scientific, moral and material condition of every physician in the county; and systematic efforts shall be made by each member, and by the society as a whole, to increase the membership until it embraces every qualified physician in the county.

SEC. 11. At some meeting in advance of the Annual Session of this Society, each county society shall elect a delegate or delegates to represent it in the House of Delegates of this Society, in the proportion of one delegate to each twenty-five members, and one for each major fraction thereof, and the Secretary of the Society shall send a list of such delegates to the Secretary of this Society at least ten days before the Annual Session.

SEC. 12. The Secretary of each component society shall keep a roster of its members, and of the non-affiliated registered physicians of the county, in which shall be shown the full name, address, college and date of graduation, date of license to practice in his State, and such other information as may be deemed necessary. In keeping such roster the Secretary shall note any changes in the personnel of the profession by death, or by removal to or from the county, and in making his annual report he shall endeavor to account for every physician who has lived in the county during the year.

SEC. 13. The Secretary of each component society shall forward its assessment, together with its roster of officers and members, list of delegates, and list of non-affiliated physicians of the county, to the Secretary of this Society each year thirty days before the Annual Session.

SEC. 14. Any county society which fails to pay its assessment, or make the report required, on or ten days before shall be held as suspended, and none of its members or

delegates shall be permitted to participate in any of the business or proceedings of the Society or of the House of Delegates until such requirements have been met.

CHAPTER X.—MISCELLANEOUS.

SECTION 1. No address or paper before the Society, except those of the President and orators, shall occupy more than twenty minutes in its delivery, and no member shall speak longer than five minutes nor more than once on any subject, except by unanimous consent.

SEC. 2. All papers read before the Society or any of the Sections shall become its property. Each paper shall be deposited with the Secretary when read.

SEC. 3. The deliberations of this Society shall be governed by parliamentary usage as contained in Roberts' Rules of Order, when not in conflict with this Constitution and By-laws.

SEC. 4. The Principles of Medical Ethics promulgated by the American Medical Association shall govern the conduct of members in their relations to each other and to the public.

CHAPTER XI.—AMENDMENTS.

The House of Delegates may amend any article of this Constitution by a two-thirds vote of the Delegates present at any Annual Session, provided that such amendment shall have been presented in open meeting at the previous Annual Session, and that it shall have been published twice during the year in the bulletin or journal of this Society, or sent officially to each component society at least two months before the meeting at which final action is to be taken.

County and District Societies.

COUNTY SOCIETIES.

Polk County.—The Polk County Medical Society met in the office of Dr. Frank A. Lee, at Mena, on the 15th of April, 1912, and the following officers were elected: Dr. Philip Ross Watkins was elected president for the incoming term, with Dr. David Connally as vice president. Dr. W. P. Parks was elected delegate to the State Medical Society, to be held at Hot Springs, with Dr. J. R. Davis as his alternate. Dr. Frank A.

Lee was re-elected secretary-treasurer of the society, and Drs. Mullins of Hatfield, Charles Sanford of Board Camp and John T. Bogard of Mena were elected censors for one, two and three years, respectively.

No further business being on the program, the meeting was adjourned to meet again at the same place on May 25, 1912.

Frank A. Lee, Secretary.

Yell County.—The Yell County Medical Society held its regular meeting in Ola on April 13, with the following members present: Dr. C. B. Linzy, president; Dr. M. A. Worshem, Dr. G. C. Davis, Dr. W. R. Brewer, Dr. A. D. Gillem, Dr. Strait, Dr. Harkey, Dr. Cook and Dr. J. R. Linzy.

Dr. C. B. Linzy was elected as a delegate to the State Society, and Dr. A. D. Gillem alternate. A number of interesting cases were reported and discussed by the members. The next meeting will be held in Dardanelle, June 11.

J. R. Linzy, Secretary.

Union County.—On April 1st the Union County Medical Society met in El Dorado in regular session, President F. O. Mahoney of Huttig, Ark., in the chair. On account of bad roads there were very few out-of-town doctors present, owing to which the regular program was postponed until next meeting.

Drs. Wharton and Mitchell reported an interesting case of "Malarial Hematuria Complicated by Chomenia."

The present smallpox situation of El Dorado was discussed.

Dr. S. E. Thompson of El Dorado will return in a few days from New Orleans, where he will have spent six weeks attending the clinics.

J. G. Mitchell, Secretary.

Pulaski County (Meeting of April 1, 1912).—Meeting called to order at 8:10 p. m. by President J. G. Watkins, with the following members present: Drs. Carmichael, Ogden, Snodgrass, Maxwell, Gray, Caldwell, Davis, Saxon, E. Bentley, Meriwether, Bathurst, Gibson and Dooley.

Minutes of last meeting read and approved. Dr. Gray gave history of an interesting clinical case of malarial infection, and hypodermic injection of quinine, followed later by multiple abscesses. Bacterins

administered not affording complete cure.

The essayist for the evening, Dr. Carmichael, read an interesting paper on "Bacterins and Bacterin Therapy," expressing the opinion that stock cultures were usually not effective, owing to the fact that they are superheated in killing the bacteria and the toxins are also destroyed. He claimed that his experience showed a temperature of 60 degrees C. to be excessive and injurious to many toxins, and that temperatures are much more satisfactory ranging from 53 degrees to 55 degrees C. That in chronic conditions, especially in cases of prostatic enlargement, the bacterins were especially effective, but not so in acute urethritis or involvement of the whole system.

The paper was discussed and complimented by Drs. Ogden, Gray and Bathurst, and Dr. Carmichael made a brief reply to some inquiries.

Under the report of committees, the secretary reported that the Committee on Location of Meeting and Club Rooms was not as yet ready to report, and asked that the matter be passed until next meeting.

The secretary brought up the matter of trying to secure a permanent place for meeting in the annex to the court house when such is erected.

After some discussion, Dr. Saxon offered a motion, which was adopted, adding the names of Drs. Sheppard as county physician, Dr. McNeil as coroner, and Dr. Dooley to the Committee on Permanent Location.

Under the head of new business the election of delegates to the annual meeting of the Arkansas Medical Society, to be held at Hot Springs in May, Drs. Carmichael, Ogden, Saxon, Maxwell, Gibson, Gray and E. R. Dibrell were nominated. Dr. Carmichael received nine votes out of a total of fourteen on the sixth ballot, and was declared elected. On the twelfth ballot Dr. Ogden received eight votes out of a total of fourteen, and was declared elected. The appointment of alternates was left to the chair. A motion to adjourn was carried.

J. B. Dooley, Secretary.

Pulaski County (Meeting of April 15, 1912).—Meeting called to order at 8:28 p. m. by President Watkins, with the following members present: Drs. Kirby, Meriwether, Caldwell, Howell, Zell, Judd, Thompson, Scott, Cates, McKinney, E. E.

Hodges, Meek, Hardeman, Snodgrass and Dooley. Dr. McMurry of Miller County was present as a visitor.

Minutes of last meeting read and approved. Drs. Carmichael and Meriwether gave interesting talks in clinical cases of meningitis and typhoid, which were discussed by others.

Dr. Kirby read an interesting paper on the subject of "Some Reflex Symptoms," which was discussed by Drs. Zell, Caldwell, Judd and others.

Dr. Judd reported that the Committee on Prevention of Tuberculosis had received 8,000 pamphlets, which were to be distributed to the school children.

Dr. Thompson reported for the Committee on Auxiliary Club, stating that he had secured forty-six subscribers to the plan at \$10.00 each. Upon his motion, the secretary was requested to send notice that a meeting for organization of the club will be held immediately following the next regular meeting.

The secretary read a letter of resignation from Dr. J. M. Young, giving reasons for that step and expressing his good will toward the society and each member. The resignation was accepted without a dissenting vote.

The society ordered flowers sent to Dr. Lindsay, who was quite ill.

Owing to additional members being in good standing allowing a third delegate, the following members were nominated: Drs. Meek, Judd, Kirby, Zell, Saxon, Thompson, Cates, Hardeman, E. R. Dibrell. On second ballot Dr. Zell received eleven votes out of a total of seventeen, and was declared elected as third delegate to the Arkansas Medical Society, at Hot Springs, in May.

Motion to adjourn was carried.

J. B. Dooley, Secretary.

FIRST DISTRICT MEDICAL SOCIETY.

The first semi-annual session for 1912 of the First District Medical Society was held at Jonesboro on the 10th, under the auspices of the Craighead County Medical Society.

A very interesting program had been prepared for the occasion, but many of the profession who were booked for papers and talks on topics were prevented from being present on account of belated trains. The

members visited the local hospital, examined a number of cases of pellagra, cancer, and witnessed an operation on the eye, which was very successfully done.

The Paragould physicians attending the meeting were: Drs. Scott, Baker, H. Dickson, Wilson, Haley and McKinzie. Drs. Bradsher and Kennedy of Marmaduke, Verser of Brighton and Cothren of Walcott were also present. Mrs. F. M. Scott accompanied the doctors to Jonesboro and spent the day with friends. The attendance from Greene County was the largest from any county in the district, which is composed of more than a dozen counties in northeast Arkansas. It was decided to hold the next meeting at Jonesboro also, as the conditions of travel at this time prevented the meeting of yesterday from being as large and satisfactory as the local physicians had planned that it should be.

The Jonesboro physicians pleaded that they be given the next meeting, and all opposition was withdrawn when Dr. Olive Wilson of Paragould moved that Jonesboro be given another chance to entertain the society, and if she failed, never to let that town have the association again.

The representatives from Clay County were: Drs. H. A. Lynch, M. C. Hughey and wife, from Rector; Dr. Nesbit of Brookland, Dr. Barton of Tyronza and Dr. Hunt of Harrisburg were also present. Owing to the irregularity of trains on the Frisco, Dr. Robinson of Portia and Dr. G. A. Warren of Black Rock did not get in until the afternoon session.

Dr. John L. Jelks proved the kind of stuff doctors are made of by braving the floods and coming by way of steamer to Helena, and arriving in Jonesboro about 2 o'clock in the afternoon. Other members of the association attended under great difficulties.

Dinner was served at the Parsons Hotel, and a grinning skeleton in chalk pointed the way to the dining room, where covers were laid for forty guests, and by the side of each plate lay a pretty bunch of violets. An artist had covered the walls with illustrations in chalk, reminding the doctors of experiences earlier in their professional experiences, the best of which was one over the title of "Building Up a Practice."

A clinic was held in the afternoon at the St. Bernard's Hospital, where Dr. Ramsey, an eye and ear specialist, of Jonesboro, did

a very fine operation, and the visiting doctors were shown through the building.

The afternoon session was devoted to scientific topics, Dr. John L. Jelks of Memphis being the principal speaker. An evening session was also held, the subject of "Serum Therapy" being fully discussed by Drs. Hunt of Harrisburg, C. M. Lutterloh of Jonesboro, Henry Dickson and R. J. Haley of Paragould.

News Items.

Dr. W. F. Smith has been appointed to succeed Dr. S. S. Stewart as division surgeon of the St. Louis, Iron Mountain and Southern Railway. Dr. Smith has offices in the Leigh building, on Louisiana Street, between Second and Third streets.

Dr. George S. Brown of Conway is in Chicago, attending the clinics.

Dr. J. S. Russworm of Helena is in New York, registered at the Post-Graduate Hospital Medical School. Dr. Russworm will return in time to attend the Hot Springs meeting.

Dr. W. F. McCurry, recently of Texarkana, has moved to Little Rock and opened offices on the third floor of the State Bank building. Dr. McCurry has been abroad for the past year, attending European clinics, and will limit his practice to diseases of the eye, ear, nose and throat.

Births.

Born.—To Dr. and Mrs. Braxton V. Powell of Lester, Ark., March 13, a daughter.

Books Received.

A Handbook of Diagnosis.—For the use of practitioners and students. By J. C. Wilson, A. M., M. D., Professor of Medicine and Clinical Medicine in the Jefferson Medical College, and physician to its hospital; physician to the Pennsylvania Hospital, etc. Four hundred and eighteen text illustrations and fourteen full-page plates. Third edition. Thoroughly revised. Price, \$6.00. J. B. Lippincott Company, Philadelphia and London.

Recent Methods in the Diagnosis and Treatment of Syphilis.—(The Wasserman Serum Reaction and Ehrlich's Salvarsan.) By Carl H. Browning, M. D., Lecturer in Clinical Pathology, University of Glasgow, and Ivy McKenzie, M. A., B. Sc., M. B., Ch. B., Director Western Asylum's Research Institute, Glasgow, etc. In collaboration with John Cruickshank, M. B., Ch. B., Charles G. A. Chislett,

M. B., Ch. B., Walter Gilmour, M. B., Ch. B., and Hugh Morton, M. B., Ch. B., with an introduction by Robert Muir, M. A., M. D., F. R. S., Professor of Pathology in the University of Glasgow. Lea & Febiger, Philadelphia and New York, 1912.

Book Reviews.

Infections of the Hand.—A Guide to the Surgical Treatment of Acute and Chronic Suppurative Processes in the Fingers, Hand and Forearm. By Allen B. Knave, M. D., Assistant Professor of Surgery, Northwestern University Medical School, Chicago. Octavo, 447 pages, with 133 illustrations. Cloth, \$3.75, net. Lea & Febiger, Philadelphia and New York, 1912.

The complexity of the hand, the almost daily dangers to which it is exposed, and the relative frequency with which it is injured make a contribution of its infections a very welcome one. The author has given his readers the result of years of clinical observation, coupled with experimental and anatomical investigations. The subject is treated of in two general classes.

1. Simple localized infections and allied monor clinical entities.

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- (a) Discussion and diagnosis and treatment in general.
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All the simpler infections are clearly discussed and generously illustrated. The chapter on carbuncle is especially an illuminating one, and the treatment clear-cut. One of the most interesting chapters in the book is the one which treats of the symptoms, signs and diagnosis of tenosynovitis and fascial space abscesses. What country practitioner has not had to deal with such conditions? This chapter alone is worth the price of the book. There are 133 illustrations of

the various subjects, and numerous case reports to enrich the special points discussed. Every surgeon should have the book at his elbow, and every general practitioner should have it for quick reference.

Anatomy.—A Manual for Students and Practitioners. By John Forsyth Little, M. D., Assistant Demonstrator of Anatomy, Jefferson Medical College. Second edition, revised and enlarged. Illustrated with seventy-five engravings. Cloth; 12 mo, 491 pages. The Medical Epitoms Series. Lea & Febiger, Philadelphia and New York.

This is a second edition of the work originally written by Dr. F. J. Brockway. It has been carefully brought up to date, and Dr. Little, the new author, presents the subject in a clear and concise manner. Suggestions from Dr. Spitzka are embraced in the chapters on the nervous system. The little book is to be highly recommended.

Microscopy, Bacteriology and Human Parasitology.—By P. E. Archinard, A. M., M. D., Bacteriologist, Louisiana State Board of Health and City Board of Health, New Orleans. New (second) edition, thoroughly revised. 12 mo, 267 pages, with 100 engravings and six plates. Cloth, \$1.00, net. The Medical Epitome Series. Lea & Febiger, Publishers, Philadelphia and New York, 1912.

In this, the second edition of Dr. Archinard's popular little manual, many additions have been made and new information included on a few protozoa nearly akin to bacteria. We have had occasion to review the work before, and now, as then, unhesitatingly commend it to students and practitioners.

Physiology.—A Manual for Students and Practitioners. By A. E. Guenther, Ph. D., Professor of Physiology in the University of Nebraska, and Theodore C. Guenther, M. D., Attending Physician, Norwegian Hospital, Brooklyn, N. Y. New (second) edition, thoroughly revised; 12 mo., 269 pages, illustrated. Cloth, \$1.00 net. The Medical Epitome Series. Lea & Febiger, Publishers, Philadelphia and New York, 1912.

A very satisfactory condensation of physiologic knowledge.

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